### VPDES PERMIT PROGRAM FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES permit listed below. This permit is being processed as a minor industrial permit. The effluent limitations contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260 et seq. Ampro Shipyard repairs and maintains marine vessels and their diesel engines. Discharges are due to the pressure wash equipment, sandblasting and stormwater. This permit action consists of reissuing a VPDES permit for this facility, including new outfalls, establishing new limitations and updating language in special conditions.

Facility Name and Address:

SIC Code: 3732

Ampro Shipyard P.O. Box 2056

2.

Kilmarnock, Va. 22482

Facility Location: 25 Shipyard Lane, Weems, Va. 22576

Permit No. VA0089303 Existing Permit Expiration Date: 7-29-07

3. Owner Contact: Chesapeake Bay Fishing Co. LLC d/b/a

Ampro Shipyard and Diesel Lynn Haynie, Manager

Telephone #: 804-438-6050

Permit Drafted By: D. M. Mosca Date: 11-28-07

Application Complete Date: 6-5-08

DEQ Regional Office: Piedmont Regional Office

Reviewed by: PRO Staff: Gina Kelly 12-14-07

Ray Jenkins 2-7-08

5. Receiving Waters Classification (See Attachment C):

River Mile: 3-CAR000.18 for all outfalls

Receiving Stream: Carter's Creek
Basin: Rappahannock River

Subbasin: NA (Not Applicable)

Section: 1
Class: II
Special Standards: a

7-Day, 10-Year Low Flow: NA for Tidal streams
1-Day, 10-Year Low Flow: NA for Tidal streams

30Q5 Flow: NA for Tidal streams Harmonic Mean: NA for Tidal streams

Tidal? Yes On 303(d) list? NO

6. Operator License Requirements None

7. Reliability Class Designation: None

8. Permit Characterization:

(x) Private () Federal () State () POTW

() Possible Interstate Effect

() Interim Limits in other Document (attach to Fact Sheet)

9. Schematic of Wastewater Treatment System(s)/general description of the production cycle(s) and activities of the facility.

See Attachment A for site map. The owner pressure washes boats to create a process water discharge. The facility averages about 25 vessels per year. The flow of 21,600 gpd was obtained as an average of the flows reported for the WET testing, and the owner amended the application stating that was a more accurate number than the calculation the engineer had originally provided in the application. The high of the amount of vessels washed, according to the 2C application, was 34 vessels in 1999 and the low was 10 vessels in 2006. Any other discharge is due to stormwater. No production based technology guidelines were found to apply.

| Outfall Number | Discharge Source                     | Treatment | Flow   |
|----------------|--------------------------------------|-----------|--|
| 001*           | Crandall-Type Railway                | Screening | 21,600 gal/day   |
| 901*           | Crandall-Type Railway                | None      | Stormwater with potential for contact with site activities |
| 902            | Eastern-most Railway<br>Service Dock | None      | Uncontaminated stormwater only allowed                     |
| 903            | Western-most Railway<br>Service Dock | None      | Uncontaminated stormwater only allowed                     |
| 904            | The Dirt Dock                        | None      | Uncontaminated stormwater only allowed                     |
| 905            | The Eastern-most "C" Dock            | None      | Uncontaminated stormwater only allowed                     |
| 906            | The Western-most "C"<br>Dock         | None      | Uncontaminated stormwater only allowed                     |
| 907            | Stormwater ditch                     | None      | Stormwater with potential for contact with site activities |
| 908            | Stormwater ditch                     | None      | Stormwater with potential for contact with site activities |
| 909            | Stormwater ditch                     | None      | Stormwater with potential for contact with site activities |
| 910            | Stormwater ditch                     | None      | Stormwater with potential for contact with site activities |

<sup>\*</sup>Outfalls 001 and 901 are the same, but the monitoring requirements for Outfall 901 apply only during a measurable storm event as defined on the Part I.A. Page.

- 10. Sewage Sludge Use or Disposal: NA
- 11. Discharge Location Description: See **Attachment B** for Irvington topo map.

- 12. Material Storage: List the type and quantity of wastes, fluids, or pollutants being stored at this facility.
  - Fuel Oil used to Fire Boilers.
  - Boiler Room—Chemlok 220, 1 gal., an adhesive, and 3 gal. rubber solvent.
  - Diesel Shop—Foremost 1194 Rust Blitz:
  - Paint Room—paint thinner, antifouling paint, primer and topsides paint. Quantity changes based on the vessel worked on.
- 13. Ambient Water Quality Information: The reference station used is 3-CTR001.06, which is located on Carter's Creek at the pier at the end of Crocketts Lane. It is located approximately 1 mile upstream of the discharge. This is the same station used for the last permit reissuance. (Attach. C). In the 2006 305(b)/303(d) integrated report, Carter's Cove, the arm of Carter's Creek on which the discharge is located, was assessed as a Category 5A water. During the 2006 cycle, the Chesapeake Bay Water Quality Standards were adopted and the mesohaline Rappahannock River estuary, which includes Carter's Cove, failed both the Shallow Water Use's Submerged Aquatic Vegetation acreage criteria and the Open Water Use's 30-day summer dissolved oxygen criteria. This impairment continues in the draft 2008 report. The segment is fully supporting with observed effects for the Shellfish Consumption Use. The draft 2008 report includes an expanded closed area, so the Shellfish Use will be considered impaired when that report becomes final. The shellfish bacteria TMDL for the Carter's Creek Watershed was approved by the EPA on September 20, 2007 and the State Water Control Board on July 31, 2008. The discharge did not receive an allocation because there is no sewage component to the Ampro Shipyard discharge. The segment was assessed as fully supporting the Recreation and Fish Consumption Uses.
- 14. Antidegradation Review and Comments.

The State Water Control Board's Water Quality Standards includes an antidegradation policy (9 VAC 25-260-30). All state waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

Carter's Creek has been determined to be Tier 2 by DEQ-PRO's Water Planning Staff. The 2006 305(b)/303(d) integrated report information doesn't affect the tier. The new Chesapeake Bay water quality standards are applied on a large, salinity-segment scheme. The tiers are based on local water quality information, regardless of the Chesapeake Bay Water Quality Standard status.

- 15. Site Inspection: The technical inspection was performed on April 3, 2007. (Attachment D).
- 16. Effluent Screening and Limitation Development:
  - Water Quality Based Limits: See Attachment C for MSTRANTI calculation of wasteload allocations.
  - Limitations and monitoring for stormwater are required under the VPDES permit regulation,

9 VAC 25-31-220A, and EPA's storm water effluent limitation guidelines in the Code of Federal Regulations at 40 CFR Part 429, Part 418, Part 443, Part 411, and Part 423. Ampro Shipyard has submitted a 2F application and stormwater regulations have been addressed in this draft permit. Monitoring at the stormwater outfalls has been set at 1/Year, to follow the permit manual guidance for other stormwater sites, except for Outfall 901. Because copper, zinc and cyanide were seen at amounts greater than two times the standard at that outfall, the sampling frequency was increased for those parameters, and sampling for other parameters was left at 1/6 months. Ammonia was seen at Outfall 907 at levels greater than the screening criteria of two times the acute standard in stormwater runoff. As a result, a Stormwater Management Evaluation must take place at the 901 and 907 outfalls and monitoring must take place quarterly for the cited parameters. Because sampling on the other side of the railway from the 907 outfall (identified as "SW 001" in application, subsequently identified as 908, and deemed equivalent to 907) has turned up results of greater than twice the acute standard for cyanide and zinc, zinc has also been made a quarterly parameter at 907 (cyanide was already detected at 907 at greater than twice the acute standard).

- Evaluation of effluent data to determine the need for water quality based limits or toxics monitoring.
  Effluent data from the application was evaluated for the process water outfall 001. (The DMR data
  that exist were older than 3 years, which exceed the 3-year cutoff in the application instructions for
  current data. The facility was referred to Enforcement for non-submittal of reports). Limits for
  copper, zinc and ammonia have been shown to be necessary at this time, to be effective in
  accordance with a 4-year compliance schedule.
- Monitoring at 001 for dissolved arsenic is being required at this time as the total metals data suggest
  that a limit may be necessary, but in accordance with the permit manual protocol, cannot be used to
  determine the need for a limit. A larger data pool of the appropriate data will determine whether a
  limit is necessary. If the new data shows a problem, DEQ has the authority to re-open the permit for
  modification or revoke/reissuance at any time prior to expiration.
- Regarding the di-2-ethylhexylphthalate datapoint of 5 ug/l at 001, Guidance Memo 00-2011 states that, "This substance appears to be a component of the plastic/rubber apparatus used in collecting and/or preparing samples for analysis. The result is contamination of the sample to a minor extent. The analytical results for this material may be disregarded unless the reported concentrations exceed 30 ug/l or there is an identifiable source of this material tributary to the effluent in question. "In addition, the result obtained does not exceed the human health wasteload allocation of 300 ug/l.
- Dissolved lead and total selenium data for 001 were used to rule out the need for limits for those parameters, though dissolved lead is being continued as a monitoring parameter from the previous permit.
- The total chromium datapoint obtained at 001 was used with wasteload allocations for chromium VI to rule out the need for a limit. There is no chromium III salt water standard.
- The Thallium result of <20 ug/l at 001 is less than the human health wasteload allocation of 32 ug/l, and is considered to be absent for the purpose of this evaluation.
- The Water Quality Monitoring form contained several parameters that were analyzed as less than detectable, but the detection level exceeded DEQ suggested quantification levels (QLs). These parameters were antimony, cadmium, nickel, silver and chlordane. Antimony has a human health wasteload allocation of 22,000 ug/l; the sample result was <100 ug/l. Since this level is so much less than the human health wasteload allocation, it may be considered absent for the purpose of this evaluation. Dissolved cadmium, dissolved nickel and dissolved silver were reported at levels of</p>

- < 10, <10 and <20 ug/l, respectively, while the corresponding requested QLs were 0.3, 0.5 and 0.2 ug/l, respectively. On June 25, 2007, a process water (001) sample was analyzed and results for dissolved cadmium, dissolved nickel and dissolved silver were recorded as <0.01, < 0.01, and < 0.02 ug/l, respectively, which are less than the requested QLs, so these parameters may be considered absent for the purpose of this evaluation. A process water analysis that included chlordane at a non-detectable level was taken on June 20, 2007. However, this detection level was also 1.0 ug/l, which exceeded the DEQ requested QL. Another sample taken for chlordane on 4/16/08 had a result of <0.2 µg/L. Because this result is less than the requested QL, it may be considered to be absent for the purpose of this analysis.
- The Attachment A form contained some detectable parameters that could not be traced back to the laboratory certificates for the process water outfall and the owner could not clarify the sampling event for the data. Therefore, monitoring for total cyanide and dissolved sulfide were added to the 001 Part I. A. page in order to develop a database for future permitting decisions. The accuracy and precision of using total sulfide results for developing limits for H<sub>2</sub>S have recently come under question. According to Standard Methods, the unionized H<sub>2</sub>S "can be calculated from the concentration of dissolved sulfide, the sample pH, and the conditional ionization constant of H<sub>2</sub>S." Based on the above, it now appears to be more appropriate to specify that results be reported as dissolved sulfide. To provide data to evaluate the potential presence of H<sub>2</sub>S and total cyanide and the need for a limit, dissolved sulfide and total cyanide monitoring is required once per six months by grab sample for this permit re-issuance. The chloride result provided also could not be traced back to a lab certificate for the process water outfall, but it is only required to be sampled for fresh water discharges and those to public water supplies so it is not being required as this discharge is to salt water.
- In addition, detectable data at 001 were evaluated for human health wasteload allocations for nickel, selenium, zinc, chlordane, and cyanide and it was found that the aquatic life wasteload allocations were controlling for these parameters. Therefore, no further human health evaluation was necessary.
- Stream Flow Basis for wasteload allocations and Calculations of wasteload allocations This facility discharges into tidal waters and therefore no stream flows are available. Consequently, agency defaults, which are appropriate for shore based discharges, have been used for the determination of wasteload allocations. Effluent data used in MSTRANTI was supplied from the EPA Form 2C. See Attachment C.
- Computer printout of the WLA.exe and MIX.exe computer programs. See Attachment C
- Explanation if pollutants reported on Form 2C in quantifiable amounts are not limited in the permit.
   See above for discussion of stormwater.
- Quantification Levels. The permit manual calls for metals QLs to be the lesser of 0.4 WLAa or 0.6 WLAc, but not less than: 0.5 ug/l for Cu, 0..5 ug/l for Pb, 2.0 ug/l Zn, 1.0 ug/l for As. In the generation of WLAs from the MSTRANTI spreadsheet, using agency defaults for mixing, the values below were generated. The more stringent is asterisked. Other QLs have been established in accordance with current staff guidance. Maximum QLs are established for the monitoring only parameters of Dissolved Arsenic, Dissolved Lead, TSS, total cyanide and dissolved sulfide QLs are established for parameters for which a specific QL is needed to accurately evaluate the reported data or to properly determine compliance. For the parameters TPH and COD, which are to be monitored only, standard laboratory QLs will be adequate for reporting purposes. Specific QLs for TPH and COD are therefore, not needed.

| Metal                   | WLAa ug/l | WLAc ug/l | 0.4 WLAa ug/l<br>(see Mstranti<br>SSTV values) | 0.6 WLAc ug/l |
|-------------------------|-----------|-----------|--|---------------|
| As, Dissolved           | 35        | 450       | 14*  | 270           |
| Cu,Total<br>Recoverable | 4.7       | 75        | 1.9*   | 45            |
| Pb, Dissolved           | 120       | 120       | 48*  | 72            |
| Zn,Total<br>Recoverable | 45        | 1000      | 18*  | 600           |

### Basis for Effluent Limitations

001 Process Wastewater (pressure washing)

| Parameter                    | Basis                      |  |
|------------------------------|----------------------------|--|
| Flow                         | NA                         |  |
| рН                           | Water Quality-based limits |  |
| Total Suspended Solids       | NA                         |  |
| Total Petroleum Hydrocarbons | NA                         |  |
| Ammonia-N                    | Water Quality-based limits |  |
| Chemical Oxygen Demand       | NA                         |  |
| Dissolved Oxygen             | Water Quality-based limits |  |
| Total Recoverable Copper     | Water Quality-based limits |  |
| Total Recoverable Zinc       | Water Quality-based limits |  |
| Dissolved Lead               | NA                         |  |
| Dissolved Arsenic            | NA                         |  |
| Dissolved Sulfide            | NA                         |  |
| Total Cyanide                | NA                         |  |

Discharges from this facility consist of precipitation runoff, wastewaters from water-washing and pressure-washing. These include process wastewaters which must be considered separately from stormwater. A Crandall-type railway is one that has a continuous but not solid deck that extends over the water. Discharges from this point source include but are not limited to precipitation runoff, wastewaters from water-washing and pressure-washing. Department of the Navy documentation (Filtration of Runoff from Pressure Washing Vessel Hull in Dry-dock September 1995 NSRP 0452, p. 8-12) shows that samples of pressure wash water typically contain solids of paint chips, algae and barnacles; metals are present as well. The permit manual requires that stormwater discharges from shipyards monitor the above parameters (except that TPH is substituted for Oil and Grease as a more precise measurement, and Lead is an additional parameter, see rationale below). The DEQ-TRO has been using the above parameters for monitoring pressure washing facilities in their region and for consistency's sake, the same parameters have been adopted for the Ampro Shipyard permit.

901 Stormwater Discharges from the Railway

| Parameter                    | Basis                      |  |  |  |
|------------------------------|----------------------------|--|--|--|
| Flow                         | NA                         |  |  |  |
| рН                           | Water Quality-based limits |  |  |  |
| Total Suspended Solids       | NA                         |  |  |  |
| Total Petroleum Hydrocarbons | NA                         |  |  |  |
| Chemical Oxygen Demand       | NA                         |  |  |  |
| Dissolved Copper             | NA                         |  |  |  |
| Dissolved Zinc               | NA                         |  |  |  |
| Dissolved Lead               | NA                         |  |  |  |

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907 Stormwater Discharges (representative of 908-910)

| Parameter                    | Basis                      |  |
|------------------------------|----------------------------|--|
| Flow                         | NA                         |  |
| рН                           | Water Quality-based limits |  |
| Total Suspended Solids       | NA                         |  |
| Total Petroleum Hydrocarbons | NA                         |  |
| Chemical Oxygen Demand       | NA                         |  |
| Dissolved Copper             | NA                         |  |
| Dissolved Lead               | NA                         |  |
| Dissolved Zinc               | NA                         |  |
| Ammonia                      | NA                         |  |
| Cyanide                      | NA                         |  |

Lead has been added as a monitoring parameter because it is found in the paint of older ships and is highly toxic. [Department of the Navy documentation (Filtration of Runoff from Pressure Washing Vessel Hull in Dry-dock September 1995 NSRP 0452, p. 41)]

17. Compliance Schedule: The permittee shall achieve compliance with the final limits and monitoring requirements for Total Recoverable Copper, Total Recoverable Zinc, Dissolved Oxygen and Ammonia-Nitrogen at 001, as specified in this permit in accordance with the schedule found in section I.B.

The reasonable potential analysis of site specific effluent data was compared against the Virginia Water Quality Standards, 9 VAC 25-260, and indicated the need to establish effluent limitations for zinc, copper, dissolved oxygen and ammonia-nitrogen. As these are new and more stringent effluent limitations, it is appropriate to allow a period of time for the permittee to achieve compliance.

The VPDES Permit Regulation at 9 VAC 25-31-250 allows for schedules that will lead to compliance with the Clean Water Act, the State Water Control Law, and regulations promulgated under them.

18. Antibacksliding statement: All limitations in the proposed permit are the same or more stringent than the limitations in the current permit.

# 19. Special Conditions

C. Other Requirements or Special Conditions

C.1.a. Total Maximum Daily Load (TMDL) Reopener

Rationale: Section 303(d) of the Clean Water Act requires that TMDLs be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. This reopener is being put into all permits even if the discharge is not to a listed segment. The re-opener recognizes that, according to section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed it they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.

C.1.b.i and ii. Nutrient Reopeners

Rationale: 9 VAC 25-31-390 A authorizes DEQ to modify VPDES permits to promulgate amended water quality standards. Future total phosphorus and total nitrogen limits may be needed.

- C.1.c. Water Quality Criteria Reopener.
  - VPDES Permit Regulation, 9 VAC 25-31-220 D, requires effluent limitations to be established which contribute to the attainment or maintenance of the water quality standards.
- C.2. Materials Handling/Storage. 9 VAC 25-31-50, Section A. prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia Section 62.1-44.16 and 62.1-44.17 authorizes the Board to regulate the discharge of industrial waste or other waste.
- C.3. BMPs. BMPs are used in permits to require the permittee to control or abate pollution by means other than typical wastewater treatment. They can be used when effluent limits alone are not sufficient to achieve the intent of the Law (VPDES permit manual). VPDES Permit Regulation, 9VAC 25-31-220 K, requires use of best management practices where applicable to control or abate the discharge of pollutants when numeric effluent limits are infeasible or the practices are necessary to achieve effluent limit or to carry out the purpose and intent of the Clean Water Act and State Water Control Law. The clarifying phrase, "the report, as submitted on Attachment A, shall include..." was added to Part I.C.3.b to specify that the weekly audit checklist required was the Attachment, not a list of the BMPs themselves. A DEQ inspector requested that the clarification be made. The BMPs that apply to Vessels of the Armed Forces were not added, as this facility does not perform work on those vessels.
- C.4. Sampling Instructions. This is a customized condition containing sampling instructions for process water outfalls. The instructions were adapted from the permit manual stormwater section, and other agency permits to standardize sampling efforts from the pressure washing, and eliminate potential tidal effects in accordance with 9 VAC25-31-220.
- C.5. Compliance Reporting
  Rationale: Authorized by VPDES Permit Regulation, 9 VAC 25-31-190 J 4 and 220 I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.
- C.6. Notification Levels. Required by VPDES Permit Regulation, 9 VAC 25-31-200 A for all manufacturing, commercial, mining and silvicultural dischargers.
- C.7. Tributyltin (TBT) Exclusion. The state has surface water quality criteria established for this biocide under 9 VAC 25-260-140 B.1., of the State's Water Quality Standards (9 VAC 25-260-5 et seq). Due to the nature of the permittee's operations, it has been determined that a prohibition on the use (removal and /or application of hull coatings formulated with TBT) of this substance is an appropriate control. Should the permittee decide to use products with this substance. the permit may be reopened and suitable monitoring/limitations would be imposed at that time.
- C.8. Operations and Maintenance (O&M) Manual. Rationale: Required by Code of Virginia Section 62.1-44.16; VPDES Permit Regulation 9 VAC 25-31-190.E and 40 CFR 122.41(e). These require proper operation and maintenance of the permitted facility. Compliance with an approved O&M manual ensures this. Customized in accordance with PRO convention to request action by the permittee within 90 days to inform us whether manual is current or to update it.
- C.9. Facilities Closure Plan Rationale: VPDES Permit Regulation, 9 VAC 25-31-190H (Duty to Provide Information) requires the permitee to provide information deemed to be necessary by DEQ staff. The submittal of a closure plan when

- operations at a facility cease is appropriate in order to ensure pollutants do not remain at a site when the facility closes.
- I.D. Whole Effluent Toxicity (WET). Rationale: VPDES Permit Regulation, 9 VAC 25-31-210 and 220 I, requires monitoring in the permit to provide for and assure compliance with all applicable requirements of the State Water Control Law and the Clean Water Act.
- I.E -G. Stormwater Management VPDES Permit Regulation, 9 VAC 25-31-10 defines discharges of storm water from industrial activity in 9 industrial categories. 9 VAC 25-31-120 requires a permit for these discharges. The Storm Water Pollution Prevention Plan requirements of the permit are derived from the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq. VPDES Permit Regulation, 9 VAC 25-31-220K, requires use of best management practices where applicable to control or abate the discharge of pollutants when numeric effluent limits are infeasible or the practices are necessary to achieve effluent limits or to carry out the purpose and intent of the Clean Water Act and State Water Control Law.
- Part II, Conditions Applicable to All Permits. VPDES Permit Regulation, 9 VAC 25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.
- 20. NPDES Permit Rating Worksheet: see Attachment No. E- Total Score: 48

# 21. Changes to the permit:

| OUTFALL<br>NO. | PARAMETER<br>CHANGED | MONITORING<br>REQUIREMENT<br>CHANGED |         | EFFLUEN<br>CHAN                     | IT LIMITS<br>NGED                                      | RATIONALE  |  |
|----------------|----------------------|--------------------------------------|---------|-------------------------------------|--|--|--|
|                |                      | FROM                                 | то      | FROM                                | то   |  |  |
|                | Copper               |                                      |         | Dissolved;<br>NL<br>monthly<br>max. | Total Recover- able 4.7 ug/l monthly avg/4.7 ug/l max. | water quality standards (WQS); G.M. 00-2011; effective upon a schedule of compliance |  |
| 001            | Zinc                 |                                      |         | Dissolved;<br>NL<br>monthly<br>max. | Total Recover- able 45 ug/l monthly avg/45 ug/l max.   | water quality standards (WQS); G.M 00-2011; effective upon a schedule of compliance  |  |
|                | Dissolved<br>Arsenic | None                                 | 1/6 Mo. |                                     |  | Monitoring imposed to gather more data to check if a limit is necessary              |  |
|                | Ammonia-<br>Nitrogen |                                      |         | None                                | 0.86 mg/l<br>monthly<br>avg and<br>max.                | water quality standards<br>(WQS); G.M. 00-2011                                       |  |

| OUTFALL<br>NO. | PARAMETER<br>CHANGED | MONITORING<br>REQUIREMENT<br>CHANGED |                | ARAMETER REQUIREMENT EFFLUENT LIMITS |   |  |  |  |  | RATIONALE |
|----------------|----------------------|--------------------------------------|----------------|--------------------------------------|---|--|--|--|--|-----------|
|                |                      | FROM                                 | TO             | FROM                                 | TO  |  |  |  |  |           |
|                | Dissolved<br>Sulfide | None                                 | 1/6 Mo         |                                      |   | Monitoring imposed to gather more data to check if a limit is necessary  |  |  |  |           |
| 001            | Total Cyanide        | None                                 | 1/6 Mo         |                                      |   | Monitoring imposed to gather more data to check if a limit is necessary  |  |  |  |           |
|                | Dissolved<br>Oxygen  | None                                 | 1/6 Mo         | None                                 | 5.0 mg/l<br>monthly<br>avg min.<br>and 4.3<br>mg/l min. | Chesapeake Bay standard<br>9 VAC 25-260-185  |  |  |  |           |
|                | Dissolved<br>Copper  | 1/6<br>months                        | 1/Quar-<br>ter |                                      |   | VPDES Permit Manual<br>Section IN Guidance for<br>Stormwater   |  |  |  |           |
| 901            | Dissolved Zinc       | 1/6<br>months                        | 1/Quar-<br>ter |                                      |   | VPDES Permit Manual<br>Section IN Guidance for<br>Stormwater   |  |  |  |           |
|                | Flow                 | 1/6<br>months                        | 1/Quar-<br>ter |                                      |   | Flow must be monitored each quarter with all submittals.   |  |  |  |           |
|                | Dissolved<br>Copper  | 1/Year                               | 1/Quar-<br>ter |                                      |   | VPDES Permit Manual<br>Section IN Guidance for<br>Stormwater   |  |  |  |           |
| 907            | Dissolved Zinc       | 1/Year                               | 1/Quar-<br>ter |                                      |   | VPDES Permit Manual Section IN Guidance for Stormwater; Dissolved Zn. was found at 2x acute std. on opposite side of railway, but monitoring added to this outfall since 908 is considered equivalent. |  |  |  |           |

| OUTFALL<br>NO.  | PARAMETER<br>CHANGED                                | MONITO<br>REQUIR<br>CHAN | EMENT<br>IGED  | EFFLUENT LIMITS CHANGED FROM TO |             | RATIONALE  |  |  |
|---|---|--------------------------|--|---------------------------------|-------------|--|--|--|
| 907   | Cyanide   | none                     | 1/Quar-<br>ter   | FROM                            | 10          | VPDES Permit Manual Section IN Guidance for Stormwater; Cyanide was found at 2x acute std. on opposite side of railway, but monitoring added to this outfall since 908 is considered equivalent. |  |  |
|   | Ammonia-<br>Nitrogen                                | none                     | 1/Quar-<br>ter   |                                 |             | VPDES Permit Manual<br>Section IN Guidance for<br>Stormwater   |  |  |
|   | CHANGES TO PERMIT                                   |                          |  |                                 |             |  |  |  |
| Cover page<br>boilerplate<br>language<br>current in<br>2002 | TO Cover page-boilerplate language current in 2007  | Current permit manual.   |  |                                 |             |  |  |  |
| Cover<br>page—<br>Special Std<br>a, NEW-16                  | Cover<br>page—<br>Special Std<br>a                  | NEW-18 [                 | Designation  | n has been r                    | epealed by  | WQS effective 2-12-04  |  |  |
| Cover<br>page—<br>Facility<br>Name<br>changed               | Cover page— Facility Name changed to Ampro Shipyard | Permit Application       |  |                                 |             |  |  |  |
| Parts I, 2<br>and 3   | Parts I, 2 and 3                                    | Notes hav                | Notes have changed in accordance with current permit manual. |                                 |             |  |  |  |
| A.3.  | A.3 – outfalls<br>908 – 910                         | Outfalls we              | ere added<br>nce with D                                      | in accordan<br>EQ-PRO ar        | ce with app | lication. Considered identical ed September 12, 2007.  |  |  |

| FROM       | ТО         | CHANGES TO PERMIT  RATIONALE   |
|------------|------------|--|
| B.         | B.         | 2002 permit compliance schedule was for pH and monitoring req. at 001,     |
| Compliance | Compliance |  |
| Schedule   | Schedule   | 901 and 007; 2008 permit for WQS limits for metals and ammonia at 001      |
| Scriedule  | Scriedule  | only   |
| C1         | C1         | Permit reopeners – Wording revised, TMDL reopener added, in                |
| 01         |            | accordance with current guidance   |
| C2         | C2         | Materials Handling and Storage – no change                                 |
| C3         | C3         | Shipyard BMPs – updated in accordance with current permit manual           |
|            |            | a.1. updated language  |
|            |            | a.2. deleted BMP, former # 31 inserted here per current permit manual      |
|            |            | a.3. updated language  |
|            |            | a.4. updated language  |
|            |            | a.5. no change   |
|            |            | a.6. no change   |
|            |            | a.7. no change   |
|            |            | a.8. new condition inserted re: pressure washing per current permit manual |
|            |            | a.9. former BMP #8, updated language                                       |
| C3         | C3         | Shipyard BMPs, cont.   |
|            |            | a.10. renumbered, updated language   |
|            |            | a.11. former #11 removed, incorporated into #5 Sediment trap BMP           |
|            |            | a.12. customized: drydocked period = period on the railway                 |
|            |            | a.13. no change  |
|            |            | a.14. no change  |
|            |            | a.15. updated language   |
|            |            | a.16. updated language   |
|            |            | a.17. updated language   |
|            |            | a.18. former #18 removed in current permit manual. Former #19 (Drip        |
|            |            | a.19. former #20, updated language   |
|            |            | a.20. former #21, updated language   |
|            |            | a.21. former #22, updated language   |
|            |            | a.22. former #23, no change  |
|            |            | a.23 former #24, rephrased.  |
|            |            | a.24. former #25, no change  |
| C3         | C3         | a.25. former #26, updated language   |
|            |            | a.26. former #27. updated language   |
|            |            | a.27. former #28, no change  |
|            |            | a.28. former #29, updated language   |
|            |            | a.29 former #30, no change   |
|            |            | Former #31, currently #2 above.  |
|            |            | a.30. new condition in current permit manual                               |
|            |            | a.31. new condition in current permit manual                               |
|            |            | 3.b. customized language to remove "with the DMRs" for clarification       |
|            |            | Sample Methodology – a. clarified to specify for process wastewater, b&c   |
| C4         | C4         | combined into one part b. Stormwater (SW) instructions removed to SW       |
|            |            | section below.   |
|            |            |  |
| C5         |            | 2002 Gen. Stormwater conditions – removed to SW section –revised per       |
|            |            | current permit manual  |
| C6         | C5         | Compliance Reporting - Undated Janguage additional OLs added               |
| , 25.54    |            | Compliance Reporting – Updated language, additional QLs added.             |
| C7         | C6         | notification levels – no change  |
| C9         | C7         | TBT exclusion – no change  |

|                                     |   | CHANGES TO PERMIT  |
|-------------------------------------|---|--|
| FROM                                | ТО  | RATIONALE  |
| C8                                  |   | Cooling water and boiler additives deleted as Ampro has disabled their boiler and no longer uses these.  |
| C10                                 | C8  | O&M manual – language reflects current VPDES permit manual   |
| C12                                 | C9  | closure plan -updated language   |
| C11                                 |   | submit item V and VI for form 2C—deleted—required for previous permit term, not required currently because permittee has submitted complete permit application in 2007   |
| C13                                 | (deleted)   | Water Quality Criteria Monitoring—deleted. Current guidance holds this monitoring to be an application requirement and not a permit requirement. Permittee has submitted monitoring with current application and will be sent another list before permit expiration. |
| D. TMP                              | D. WET<br>Section   | Section name changed, updated shrimp genus name: Mysidopsis -> Americamysis  |
| E.<br>Stormwater<br>Manage-<br>ment | E. SW Mgt<br>F. SWPPP<br>G. Sector<br>Specific SW<br>Req. | Stormwater Section E. in 2002 permit broken out into E – G. with language updated throughout. 2007 E. 1. Stormwater Management. Evaluation new to draft permit. Updated to current permit manual language.   |
| Part II                             | Part II   | Current permit manual.   |

- 22. Variances/Alternate Limits or Conditions: None are necessary.
- 23. Public Notice: The draft permit was public noticed in the Rappahannock Record. No comments were received. Public Notice Information required by 9 VAC 25-31-280 B:

Comment period Start date: August 29, 2008 End date: September 29, 2008 Dates of Publication: August 28, 2008 and September 4, 2008

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.

Contact for public comments, document requests and additional information: Ms. Denise Mosca at: Virginia Department of Environmental Quality Piedmont Regional Office 4949-A Cox Road, Glen Allen, VA 23060, Telephone No. (804) 527-5027

E-mail address: dmmosca@deq.virginia.gov. The public may review the draft permit and application at the DEQ office named above by appointment.

# 24. Additional Comments:

- a. Ampro Shipyard has been referred to Enforcement for non-submittal of items from the previous permit action. This permit expired on July 29, 2007. The permit reissuance did not occur prior to its expiration due to the lack of a complete application. Enforcement was notified.
- b. Reduced monitoring frequencies are not applicable to this facility because this program is not applicable to intermittent discharges.
- c.The WET Program has been applied to this permit because it is mandatory for discharges from any industry that falls into one of the Standard Industrial Classification Codes for applicability.
- d. Please refer to Attachment F for the EPA Checklist...
- e. The NEW standard, associated with the previous policy for nutrient enriched waters, 9 VAC-260-330 et seq, for this stream segment has been repealed with the adoption of 9- VAC 25-40 and 9 VAC 25-720. Though special standard a applies to this discharge area, because there is no sanitary sewage component, no bacteria limits have been applied.
- f. This facility is not subject to the Chesapeake Bay Nutrient General Permit. On 6/25/07, Microbac Labs reported both Total Nitrogen (TN) and TKN at 001 to be <0.5 mg/l, while Ammonia was 0.36 mg/l and Nitrate-Nitrite was 0.22 mg/l. Total Phosphorus (TP) was reported to be 1.4 mg/l. If TN is conservatively approximated by the sum of the ammonia and the nitrate- nitrite, it would be 0.58 mg/l.

0.58 mg/l TN x 0.0216 MGD x 8.3438 x 365 days/yr = 38 lb/yr 1.4 mg/l TP x 0.0216 MGD x 8.3438 x 365 days/yr = 92 lb/yr

Neither of these loads exceed the equivalent load for a 100,000 gpd sewage treatment plant of 5700 lb/yr TN and 761 lb/yr TP. for a non-expanding, existing facility.

- g. A threatened and endangered species evaluation is not triggered with the addition of new stormwater outfalls in this permit because this is an existing facility. The outfalls are describing discharges that have always been present, but just included in the permit at this time. Guidance Memo 07-2007 states that a threatened and endangered species screening should be made for new, individual VPDES permits, and judgement should be used for individual VPDES modifications or reissuances that allow increased discharge flows such than an existing mixing zone is significantly expanded. This is not the case for this facility.
- h. Dissolved Oxygen limitations were taken from 9 VAC 25-260-185 Criteria to protect designated uses from the impacts of nutrients and suspended sediment in the Chesapeake Bay and its tidal tributaries. Migratory fish spawning and nursery criteria do not apply as the closest area for applicability is Morattico, upstream from this facility. The open water criteria apply. Since the salinity near the facility is 12-20 parts per thousand, the 30 day mean greater than or equal to 5.0 mg/l applies. The instantaneous minimum criterion greater than 4.3 mg/l at temperatures greater than or equal to 29 deg. C was applied as it was more stringent. The temporal application of these criteria are year-round. The 4.3 mg/l criterion is being converted to a permit limit, and using BEJ, made more stringent by not recognizing the temperature exclusion. The 7 day mean greater than or equal to 4.0 mg/l was not applied. By not applying the temperature exclusion, the 4.3 mg/l minimum limit would supersede a 4.0 mg/l criterion used for a weekly average because it is more stringent.

# 25. 303(d) Listed Segments (TMDL):

This facility directly discharges to Carter's Cove in Carter's Creek. During the 2006 cycle, the Chesapeake Bay Water Quality Standards were adopted and the mesohaline Rappahannock River estuary, which includes Carter's Cove, failed both the Shallow Water Use's Submerged Aquatic Vegetation (SAV) acreage criteria and the Open Water Use's 30-day summer dissolved oxygen criteria. This impairment continues in the draft 2008 report. The segment is fully supporting with observed effects for the Shellfish Consumption Use. The draft 2008 report includes an expanded closed area, so the Shellfish Use will be considered impaired when that report becomes final. The shellfish bacteria TMDL for the Carter's Creek Watershed was approved by the EPA on September 20, 2007 and the State Water Control Board on July 31, 2008. The discharge did not receive an allocation because there is no sewage component to the Ampro Shipyard discharge. A TMDL for SAV acreage and dissolved oxygen has not been prepared or approved for this segment. A limit for oxygen is included in this permit to ensure this facility neither causes nor contributes to the observed effects. The permit contains a reopener condition that may allow these limits to be modified, in compliance with section 303(d)(4) of the Act once a TMDL is approved.

### List of Attachments:

Attachment A - Site Map

Attachment B - Irvington Topo Map

Attachment C - Storet Data 3-CTR001.06

Category 5 Waters Fact Sheet for Carter's Creek Ampro Process Water and Stormwater Data

MSTRANTI

Stats programs for limit calculation

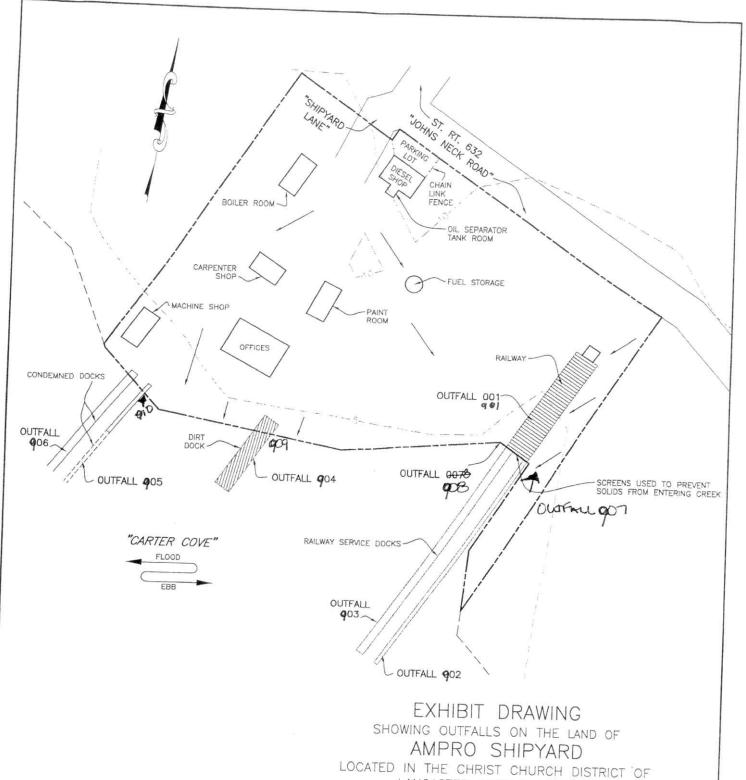
Attachment D - Inspection Report

Attachment E - NPDES Industrial Worksheet

Attachment F - EPA checklist

Attachment G - WET

# ATTACHMENT A



LOCATED IN THE CHRIST CHURCH DISTRICT OF LANCASTER COUNTY, VIRGINIA SCALE: 1"= 150'

DATE: APRIL 16, 2007

RECEIVED MAY 152007

PRO

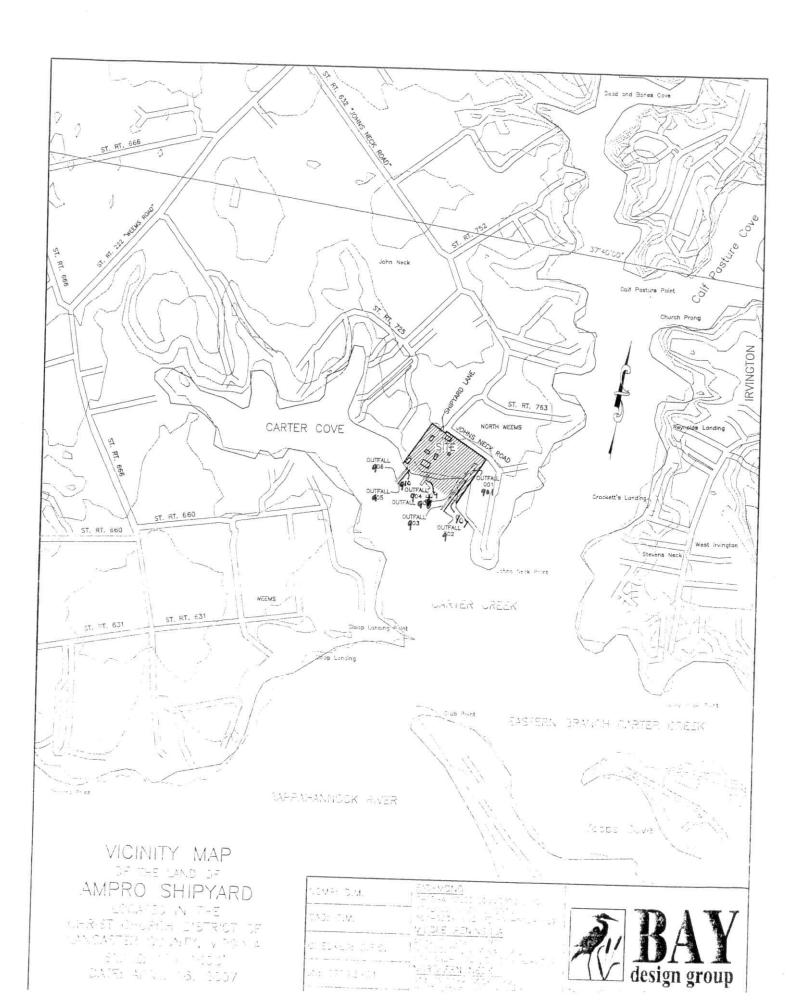
COMP: D.M. CAD: D.M. CHECKED: D.F.C. JN: 07012-01

FILED: 07012EXE3

RICHMOND 9415-A ATLEE COMMERCE BLVD ASHLAND, VIRGINIA 23005 804-550-4855 (F) 804-550-4857 MIDDLE PENINSULA 5690 PARKWAY DRIVE GLOUCESTER, VIRGINIA 23061 804-693-2993 (F) 804-693-5596 NORTHERN NECK 812 RAPPAHANNOCK DRIVE WHITE STONE, VIRGINIA 22578 804-436-8425 (F) 804-436-8427 www.baydesigngroup.com



# ATTACHMENT B



# ATTACHMENT C

# **MEMORANDUM**

# DEPARTMENT OF ENVIRONMENTAL QUALITY Piedmont Regional Office 4949-A Cox Road Glen Allen, Virginia 23060

SUBJECT:

Flow Frequency and 303(d) Status Determination

Ampro Shipyard - VA0089303

TO:

Denise M. Mosca

FROM:

Jennifer V. Palmore, P.G.

DATE:

May 7, 2007

COPIES:

File

The Ampro Shipyard discharges to Carter Cove (an arm of Carter's Creek) in North Weems, Lancaster County, VA. The discharge is located at rivermile 3-CAR000.18. Stream flow frequencies and the current 303(d) status have been requested at this site for use by the permit writer in developing effluent limitations for the VPDES permit.

Carter Cove is tidally influenced at the discharge point. Flow frequencies cannot be determined for tidal waters, therefore dilution ratios should be used to evaluate the effluent's impact on the water body.

In the 2006 305(b)/303(d) Integrated Report, Carter Cove was assessed as a Category 5A water. During the 2006 cycle, the Chesapeake Bay Water Quality Standards were adopted and the mesohaline Rappahannock River estuary, which includes Carter Cove, failed both the Shallow Water Use's Submerged Aquatic Vegetation acreage criteria and the Open Water Use's 30-day summer dissolved oxygen criteria.

In addition, the segment was considered impaired of the Shellfish Consumption Use due to VDH shellfish condemnation 020-041C, dated December 17, 2004. The shellfish bacteria TMDL for the Carter Creek Watershed is currently under development. The draft TMDL states that "there are no permitted point source discharges that directly impact the identified impairments in the watershed"; therefore the discharge did not receive a wasteload allocation.

The segment was assessed as fully supporting the Recreation and Fish Consumption Uses.

If you have any questions concerning this analysis or need additional information, please let me know.

# Mosca, Denise

From: Palmore, Jennifer

Sent: Thursday, August 07, 2008 11:52 AM

To: Mosca, Denise Subject: Ampro Shipyard

Based on the map that is attached to the fact sheet, the location for outfall 001 is further east than what was entered in CEDS. So, instead of the discharge being located in the impaired shellfish condemnation area, during the 2006 cycle it was located in the seasonally condemned area. So it is "fully supporting with observed effects" for the Shellfish Consumption Use. That means you can remove fact sheet VAP-E26E-30 and change the reference to the shellfish impairment. However, you can only do this if you expect to issue the final permit soon. In the draft 2008 report, the closed area expanded considerably so the segment around the discharge is impaired again this cycle.

Leave the TMDL reference because it is for all of Carters Creek.

Let me know if you have any questions.

Also, in one place in the fact sheet you say "gpd", the next "gallons/year" and did you mean to have all of the formatting changes shown on the permit (see page 9)? And did you want to include the units for dissolved sulfide and total cyanide for outfall 001?

### Thanks.

Jennifer V. Palmore, P.G. Senior Environmental Engineer Dept. of Environmental Quality Piedmont Regional Office 4949-A Cox Road Glen Allen, VA 23060 (804) 527-5058 (804) 527-5106 (fax)

# Mosca, Denise

From: Palmore, Jennifer

Sent: Thursday, August 07, 2008 11:56 AM

To: Mosca, Denise

Subject: Ampro

One other thing, the Carter Creek TMDL was approved by EPA on 9/20/07 and by the SWCB on 7/31/08, so you should revise the fact sheet language to recognize that it is now final.

# Thanks.

Jennifer V. Palmore, P.G. Senior Environmental Engineer Dept. of Environmental Quality Piedmont Regional Office 4949-A Cox Road Glen Allen, VA 23060 (804) 527-5058 (804) 527-5106 (fax)

# Fact Sheets for Category 5 Waters

RIVER BASIN:

Rappahannock River Basin

STREAM NAME:

Rappahannock River

HYDROLOGIC UNIT:

02080104

TMDL ID:

VAP-E22E-01

NEW TMDL ID:

01776/10071

ASSESSMENT CATEGORY:

TMDL DUE DATE:

2010

SEGMENT SIZE:

126.34 - Sq. Mi.

**INITIAL LISTING:** 

1998

**UPSTREAM LIMIT:** 

**DESCRIPTION:** 

Oligohaline/mesohaline boundary

RIVER MILE:

~49.20

DOWNSTREAM LIMIT:

DESCRIPTION:

Mouth at Chesapeake Bay

RIVER MILE:

0.00

The mesohaline Rappahannock River and tidal tributaries.

### CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Not Supporting, Open Water Summer - Not Supporting, Deep Water Use - Not Supporting, Shallow Water Use - Not Supporting

IMPAIRMENT CAUSE: Dissolved Oxygen, Aquatic Plants (SAV)

The mainstem of the Rappahannock River from Myrtle Swamp to its mouth was originally listed in 1998 by DEQ due to dissolved oxygen violations and nutrient overenrichment. The EPA extended the segment upstream to the confluence with Totuskey Creek . In the 2004 cycle dissolved oxygen violations were noted in deepwater and deep channel stations downstream of the confluence with Lancaster Creek (Morattico), which is further downstream.

The new Chesapeake Bay Water Quality Standards were implemented during the 2006 cycle. The mesohaline portion of the Rappahannock failed both the open water summer dissolved oxygen criteria and the SAV acreage standards during the 2006 cycle. Also, applicable areas failed the deep water applicable dissolved oxygen criteria in 2006.

IMPAIRMENT SOURCE: Point Source, Nonpoint Source

Tributary strategy has been developed.

RECOMMENDATION:

Problem Characterization

# Mosca, Denise

From: Palmore, Jennifer

Sent: Monday, May 21, 2007 3:26 PM

To: Mosca, Denise

Subject: RE: Carter's Creek (Lancaster County) tier status

Yes.

Jennifer Palmore

-----Original Message-----From: Mosca, Denise

Sent: Monday, May 21, 2007 3:25 PM

To: Palmore, Jennifer

Subject: RE: Carter's Creek (Lancaster County) tier status

So we would still be Tier 2, citing the reasons mentioned...

D.

-----Original Message---- **From:** Palmore,Jennifer **Sent:** Mon 5/21/2007 3:01 PM

To: Mosca, Denise

Cc:

Subject: RE: Carter's Creek (Lancaster County) tier status

The 2006 information doesn't affect the tier. The new Chesapeake Bay water quality standards are applied on a large, salinity-segment scheme. The tiers are based on local water quality information, regardless of the CB WQS status.

Hope that helps.

Jennifer Palmore

----Original Message----From: Mosca, Denise

Sent: Thursday, May 17, 2007 3:26 PM

To: Palmore, Jennifer

Subject: Carter's Creek (Lancaster County) tier status

Hi, when we processed Tides North, we called Carter's Creek Tier 2 because it was supporting of all uses. I see in your May 7, 2007 memo for Ampro Shipyard that in the 2006 cycle, SAV and oxygen criteria were not met. In addition, the segment was considered impaired due to a shellfish consumption use, but was fully supporting for recreation and fish consumption uses.

Would the 2006 information change the tier status? thanks, Denise

| Station ID  | Collection Date | Depth Desc | Depth  | Temp Celcius | Field Ph | Do Probe | Salinity |
|-------------|-----------------|------------|--------|--------------|----------|----------|----------|
| 3-CTR001.06 | 3/30/1976       | S          | 304.50 | 13.33        | 9.00     |          |          |
| 3-CTR001.06 | 6/16/1976       | S          | 304.50 | 26.11        | 8.50     |          |          |
| 3-CTR001.06 | 8/11/1976       | S          | 304.50 | 29.00        | 9.00     |          |          |
| 3-CTR001.06 | 9/23/1976       | S          | 304.50 | 22.22        | 9.00     |          |          |
| 3-CTR001.06 | 3/9/1977        | S .        | 304.50 | 9.50         | 9.00     |          |          |
| 3-CTR001.06 | 6/23/1977       | S          | 304.50 | 25.00        | 8.50     |          |          |
| 3-CTR001.06 | 8/16/1977       | S          | 304.50 | 29.50        | 9.30     |          |          |
| 3-CTR001.06 | 9/7/1977        | S          | 304.50 | 27.00        | 9.00     |          |          |
| 3-CTR001.06 | 3/16/1978       | S          |        |              |          |          |          |
|             |                 |            | 304.50 | 6.00         | 8.50     |          |          |
| 3-CTR001.06 | 6/13/1978       | S          | 304.50 | 24.00        | 9.00     |          |          |
| 3-CTR001.06 | 9/11/1978       | S          | 304.50 | 26.50        | 9.00     |          |          |
| 3-CTR001.06 | 3/26/1979       | S          | 304.50 | 1.50         | 8.20     |          |          |
| 3-CTR001.06 | 7/1/1998        | S          | .30    |              |          |          |          |
| 3-CTR001.06 | 7/29/1998       | S          | .30    |              |          |          |          |
| 3-CTR001.06 | 7/29/1998       | S          | 1.00   |              |          |          |          |
| 3-CTR001.06 | 7/29/1998       | S          | 1.00   |              |          |          |          |
| 3-CTR001.06 | 7/29/1998       | S          | 1.00   | 29.30        | 8.32     | 8.36     | 12.60    |
| 3-CTR001.06 | 7/29/1998       | M          | 2.00   | 28.45        | 8.10     | 5.59     | 12.80    |
| 3-CTR001.06 | 7/29/1998       | S          | 1.00   |              |          |          | 11.0     |
| 3-CTR001.06 | 7/29/1998       | S          | 1.00   |              |          |          |          |
| 3-CTR001.06 | 7/29/1998       | S          | 1.00   |              |          |          |          |
| 3-CTR001.06 | 7/29/1998       | S          | .30    | 30.75        | 8.39     | 8.88     | 12.60    |
| 3-CTR001.06 | 7/29/1998       | В          | 3.10   | 27.98        | 7.62     | 2.64     | 12.90    |
| 3-CTR001.06 | 7/29/1998       | S          | 1.00   |              |          |          |          |
| 3-CTR001.06 | 8/5/1998        | S          | 1.00   |              |          |          |          |
| 3-CTR001.06 | 8/5/1998        | В          | 2.90   | 26.72        | 7.69     | 3.54     | 14.10    |
| 3-CTR001.06 | 8/5/1998        | М          | 2.00   | 26.77        | 7.87     | 5.56     | 13.80    |
| 3-CTR001.06 | 8/5/1998        | М          | 1.00   | 27.26        | 7.98     | 5.88     | 13.80    |
| 3-CTR001.06 | 8/5/1998        | S          | .30    | 27.59        | 8.00     | 6.05     | 13.70    |
| 3-CTR001.06 | 9/1/1998        | S          | .30    | 28.79        | 8.07     | 6.38     | 18.20    |
| 3-CTR001.06 | 9/1/1998        | В          | 2.40   | 28.47        | 7.51     | 4.90     | 18.50    |
| 3-CTR001.06 | 9/1/1998        | M          | 2.00   | 28.56        | 7.83     | 4.83     | 18.30    |
| 3-CTR001.06 | 9/1/1998        | S          | 1.00   | 20.00        | 7.00     | 1.00     | 10.00    |
| 3-CTR001.06 | 9/1/1998        | M          | 1.00   | 28.63        | 7.97     | 5.68     | 18.30    |
| 3-CTR001.06 | 10/7/1998       | M          | 2.00   |              | 7.83     |          |          |
| 3-CTR001.06 | 10/7/1998       | M          | 3.00   | 21.98        | 7.77     | 5.77     |          |
| 3-CTR001.06 | 10/7/1998       | В          | 3.30   | 21.93        | 7.75     |          |          |
| 3-CTR001.06 | 10/7/1998       | S          | 1.00   | 21.93        | 7.75     | 3.02     | 19.00    |
| 3-CTR001.06 | 10/7/1998       | S          |        | 22.02        | 7.00     | 6.74     | 10.50    |
| 3-CTR001.06 | 10/7/1998       | M          | .30    | 22.02        | 7.86     |          |          |
|             |                 |            | 1.00   | 22.02        | 7.86     |          | 19.60    |
| 3-CTR001.06 | 5/11/1999       | В          | 1.90   | 19.27        | 7.60     |          |          |
| 3-CTR001.06 | 5/11/1999       | S          | .30    | 21.69        | 7.31     | 6.60     |          |
| 3-CTR001.06 | 5/11/1999       | S          | 1.00   | 20.78        | 7.37     | 7.64     |          |
| 3-CTR001.06 | 6/23/1999       | S          | 1.00   | 23.15        | 8.22     | 7.25     |          |
| 3-CTR001.06 | 6/23/1999       | В          | 1.60   | 23.02        | 8.06     |          |          |
| 3-CTR001.06 | 6/23/1999       | S          | .30    | 24.25        | 8.15     |          |          |
| 3-CTR001.06 | 7/21/1999       | S          | 1.00   | 28.85        | 7.85     |          | 20.80    |
| 3-CTR001.06 | 7/21/1999       | S          | .30    | 29.08        | 7.88     | 7.00     | 20.50    |
| 3-CTR001.06 | 8/5/1999        | В          | 1.10   | 29.40        | 7.78     | 5.64     | 19.10    |
| 3-CTR001.06 | 8/5/1999        | S          | .30    | 29.53        | 7.78     | 5.58     | 19.00    |
| 3-CTR001.06 | 8/5/1999        | S          | 1.00   | 29.50        | 7.77     | 5.70     | 19.00    |

| Station ID  | Collection Date | Depth Desc | Depth | Temp Celcius | Field Ph | Do Probe | Salinity |
|-------------|-----------------|------------|-------|--------------|----------|----------|----------|
| 3-CTR001.06 | 9/9/1999        | S          | 1.00  | 26.35        | 7.86     | 8.17     | 20.10    |
| 3-CTR001.06 | 9/9/1999        | S          | .30   | 26.44        | 7.89     | 8.10     | 20.10    |
| 3-CTR001.06 | 10/5/1999       | S          | .30   | 21.86        | 7.65     | 6.89     | 18.20    |
| 3-CTR001.06 | 10/5/1999       | В          | 1.50  | 21.83        | 7.66     | 6.82     | 18.40    |
| 3-CTR001.06 | 10/5/1999       | S          | 1.00  | 21.85        | 7.67     | 6.82     | 18.30    |
| 3-CTR001.06 | 5/25/2000       | S          | .30   | 23.65        | 7.67     | 7.89     | 14.30    |
| 3-CTR001.06 | 5/25/2000       | M          | 1.30  | 23.55        | 7.62     | 7.71     | 14.30    |
| 3-CTR001.06 | 5/25/2000       | S          | 1.00  | 23.56        | 7.65     | 7.82     | 14.30    |
| 3-CTR001.06 | 6/28/2000       | В          | 1.30  | 28.27        | 7.50     | 4.96     | 14.30    |
| 3-CTR001.06 | 6/28/2000       | S          | .30   | 28.33        | 7.54     |          | 14.30    |
| 3-CTR001.06 | 6/28/2000       | S          | 1.00  | 28.27        | 7.49     | 4.78     | 14.30    |
| 3-CTR001.06 | 7/25/2000       | В          | 1.50  | 24.81        | 7.59     | 5.76     | 13.50    |
| 3-CTR001.06 | 7/25/2000       | S          | .30   | 24.81        | 7.62     | 5.91     | 13.50    |
| 3-CTR001.06 | 7/25/2000       | S          | 1.00  | 24.79        | 7.61     | 5.81     | 13.50    |
| 3-CTR001.06 | 8/30/2000       | В          | 1.70  | 25.88        | 7.84     | 4.90     | 14.40    |
| 3-CTR001.06 | 8/30/2000       | S          | .30   | 26.11        | 8.02     | 7.08     | 14.00    |
| 3-CTR001.06 | 8/30/2000       | S          | 1.00  | 25.98        | 7.97     | 6.29     | 14.20    |
| 3-CTR001.06 | 9/11/2000       | В          | 1.60  | 25.16        | 7.81     | 5.99     | 14.30    |
| 3-CTR001.06 | 9/11/2000       | S          | .30   | 25.89        | 8.01     | 8.14     | 14.10    |
| 3-CTR001.06 | 9/11/2000       | S          | 1.00  | 25.42        | 7.87     | 6.88     | 14.10    |
| 3-CTR001.06 | 10/25/2000      | В          | 1.80  | 17.84        | 8.00     | 7.58     | 15.92    |
| 3-CTR001.06 | 10/25/2000      | S          | .30   | 17.73        | 7.96     | 7.62     | 15.79    |
| 3-CTR001.06 | 10/25/2000      | S          | 1.00  | 17.73        | 7.98     | 7.58     | 15.85    |
| 3-CTR001.06 | 8/28/2001       | S          | .30   | 28.95        | 7.67     | 6.77     | 16.20    |
| 3-CTR001.06 | 10/24/2001      | S          | .30   | 19.40        | 7.85     | 8.89     | 18.60    |
| 3-CTR001.06 | 12/6/2001       | S          | .30   | 14.05        | 7.36     | 9.01     | 20.50    |
| 3-CTR001.06 | 2/7/2002        | S          | .30   | 6.21         | 7.38     | 9.45     | 19.20    |
| 3-CTR001.06 | 2/26/2002       | S          | .30   | 9.29         | 7.97     | 10.31    | 19.86    |
| 3-CTR001.06 | 3/5/2002        | S          | .30   | 7.54         | 7.56     | 10.33    | 20.30    |
| 3-CTR001.06 | 4/30/2002       | S          | .30   | 19.24        | 7.94     | 8.18     | 19.30    |
| 3-CTR001.06 | 6/5/2002        | S          | .30   | 27.93        | 7.86     | 6.68     | 18.49    |
| 3-CTR001.06 | 7/31/2002       | S          | .30   | 31.22        | 8.03     | 7.71     | 18.02    |
| 3-CTR001.06 | 9/4/2002        | S          | .30   | 26.37        | 8.11     | 8.84     | 20.02    |
| 3-CTR001.06 | 11/21/2002      | S          | .30   | 12.27        | 8.10     | 10.59    | 20.07    |
| 3-CTR001.06 | 1/14/2003       | S          | .30   | 4.37         | 8.12     | 12.63    | 15.26    |
| 3-CTR001.06 | 3/13/2003       | S          | .30   | 9.24         | 8.51     | 12.98    | 11.61    |
| 3-CTR001.06 | 5/14/2003       | S          | .30   | 23.04        | 9.03     |          | 9.96     |
| 3-CTR001.06 | 2/22/2007       | S          | .30   | 6.90         | 7.40     | 12.10    | 12.20    |
| 3-CTR001.06 | 4/9/2007        | S          | .30   | 13.00        | 8.10     | 10.30    | 11.30    |

90th Percentile 29.0 9.0 10th Percentile 9.5 7.5 Average

16.5

# SALTWATER AND TRANSITION ZONES WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Ampro Shipyard Pe Receiving Stream: Carter's Creek

Permit No.: VA0089303

Version: OWP Guidance Memo 00-2011 (8/24/00)

| Stream Information              |                   | Mixing Information                   |        | Effluent Information                          |             |            |
|---------------------------------|-------------------|--------------------------------------|--------|---|-------------|------------|
| Mean Hardness (as CaCO3) =      | NA mg/l           | ,,—                                  | 0.0216 | Mean Hardness (as CaCO3) = 25                 |             | mg/L       |
| 90th % Temperature (Annual) =   | 29 (°C)           | Acute WLA multiplier                 | 2      | 90 % Temperature (Annual) =                   | = 22        | (00)       |
| 90th % Temperature (Winter) =   | NA-no tieri (° C) | Chronic WLA multiplier               | 20     | 90 % Temperature (Winter) =NA-not tiers (° C) | =NA-not tie | (° C)      |
| 90th % Maximum pH =             | 6                 | Human health WLA multiplier          | 50     | 90 % Maximum pH =                             | 8.1         | SU         |
| 10th % Maximum pH =             | 7.5               |                                      |        | 10 % Maximum pH =                             | N<br>A      | SU         |
| Tier Designation (1 or 2) =     | 7                 |                                      |        | Discharge Flow =                              | 0.0216      | 0.0216 MGD |
| Early Life Stages Present Y/N = | >                 |                                      |        |   |             |            |
| Tidal Zone =                    | 1 (1:             | (1 = saltwater, 2 = transition zone) |        |   |             |            |
| Mean Salinity =                 | 16.5 (g/kg)       | (b)                                  |        |   |             |            |

| Parameter                           | Background |                 | Water Quality Criteria | Criteria | Wast    | Wasteload Allocations | tions   | Antidec | Antidegradation Baseline | seline  | Antideg | Antidegradation Allocations | ocations | Most Li | Most Limiting Allocations | cations |
|-------------------------------------|------------|-----------------|------------------------|----------|---------|-----------------------|---------|---------|--------------------------|---------|---------|-----------------------------|----------|---------|---------------------------|---------|
| (ug/l unless noted)                 | Conc.      | Acute           | Chronic                | H        | Acute   | Chronic               | H       | Acute   | Chronic                  | H       | Acute   | Chronic                     | Ŧ        | Acute   | Chronic                   | HH      |
| Acenapthene                         | 0          | 1               | 1                      | 2.7E+03  | -       | Ē                     | 1.4E+05 | -       | E                        | 2.7E+02 | f       | 1                           | 1.4E+04  | ı       | 1                         | 1.4E+04 |
| Acrolein                            |            | 1               | 1                      | 7.8E+02  | 1       | 1                     | 3.9E+04 | 1       | I                        | 7.8E+01 | 1       | 1                           | 3.9E+03  | 1       | 1                         | 3.9E+03 |
| Acrylonitrile <sup>c</sup>          |            | 1               | 1                      | 6.6E+00  | 1       | ı                     | 3.3E+02 | ı       | 1                        | 6.6E-01 | 1       | 1                           | 3.3E+01  | 1       | 1                         | 3.3E+01 |
| Aldrin <sup>c</sup>                 | 0          | 1.3E+00         | ı                      | 1.4E-03  | 2.6E+00 | 1                     | 7.0E-02 | 3.3E-01 | E                        | 1.4E-04 | 6.5E-01 | f                           | 7.0E-03  | 6.5E-01 | f                         | 7.0E-03 |
| Ammonia-N (mg/l) - Annual           | 0          | 1.7E+00 7.7E-02 | 7.7E-02                | 1        | 3.4E+00 | 3.8E+00               | I       | 4.3E-01 | 1.9E-02                  | I       | 8.6E-01 | 9.6E-01                     | I        | 8.6E-01 | 9.6E-01                   | 1       |
| Ammonia-N (mg/l) - Winter           | 0          | ####### ####### | #######                | 1        | #VALUE! | #VALUE!               | 1       | #VALUE! | #VALUE!                  | 1       | ####### | #VALUE!                     | 1        | #VALUE! | #VALUE!                   | 1       |
| Anthracene                          | 0          | I               | į                      | 1.1E+05  | 1       | l                     | 5.5E+06 | ı       | ı                        | 1.1E+04 | 1       | ı                           | 5.5E+05  | ı       | ı                         | 5.5E+05 |
| Antimony                            | 0          | 1               | 1                      | 4.3E+03  | 1       | 1                     | 2.2E+05 | I       | ı                        | 4.3E+02 | 1       | 1                           | 2.2E+04  | ı       | 1                         | 2.2E+04 |
| Arsenic                             | 0          | 6.9E+01 3.6E+01 | 3.6E+01                | 1        | 1.4E+02 | 1.8E+03               | 1       | 1.7E+01 | 9.0E+00                  | I       | 3.5E+01 | 4.5E+02                     | 1        | 3.5E+01 | 4.5E+02                   | 1       |
| Benzene <sup>c</sup>                | 0          | 1               | 1                      | 7.1E+02  | E       | Ī                     | 3.6E+04 | 1       | 1                        | 7.1E+01 | 1       | ı                           | 3.6E+03  | ı       | I                         | 3.6E+03 |
| Benzidine <sup>c</sup>              |            | 1               | 1                      | 5.4E-03  | 1       | 1                     | 2.7E-01 | 1       | 1                        | 5.4E-04 | 1       | 1                           | 2.7E-02  | 1       | 1                         | 2.7E-02 |
| Benzo (a) anthracene <sup>c</sup>   | 0          | 1               | 1                      | 4.9E-01  | ı       | I                     | 2.5E+01 | I       | ı                        | 4.9E-02 | 1       | 1                           | 2.5E+00  | ŀ       | 1                         | 2.5E+00 |
| Benzo (b) fluoranthene <sup>c</sup> | 0          | 1               | I                      | 4.9E-01  | 1       | 1                     | 2.5E+01 | I       | £                        | 4.9E-02 | 1       | ŧ                           | 2.5E+00  | ı       | ı                         | 2.5E+00 |
| Benzo (k) fluoranthene <sup>c</sup> | 0          | 1               | I                      | 4.9E-01  | 1       | 1                     | 2.5E+01 | 1       | ŧ                        | 4.9E-02 | 1       | ı                           | 2.5E+00  | 1       | ı                         | 2.5E+00 |
| Benzo (a) pyrene <sup>c</sup>       | 0          | 1               | I                      | 4.9E-01  | 1       | 1                     | 2.5E+01 | ı       | 1                        | 4.9E-02 | 1       | 1                           | 2.5E+00  | 1       | 1                         | 2.5E+00 |
| Bis2-Chloroethyl Ether              |            | -               | Ī                      | 1.4E+01  | 1       | I                     | 7.0E+02 | ī       | ı                        | 1.4E+00 | ı       | ı                           | 7.0E+01  | ı       | ı                         | 7.0E+01 |
| Bis2-Chloroisopropyl Ether          |            | 1               | ı                      | 1.7E+05  | 1       | 1                     | 8.5E+06 | ī       | 1                        | 1.7E+04 | 1       | 1                           | 8.5E+05  | ı       | ı                         | 8.5E+05 |
| Bromoform <sup>c</sup>              | 0          | 1               | 1                      | 3.6E+03  | 1       | 1                     | 1.8E+05 | 1       | 1                        | 3.6E+02 | 1       | 1                           | 1.8E+04  | ı       | ı                         | 1.8E+04 |
| Butylbenzylphthalate                | 0          | 1               | ı                      | 5.2E+03  | ı       | 1                     | 2.6E+05 | I       | 1                        | 5.2E+02 | ſ       | 1                           | 2.6E+04  | ı       | ī                         | 2.6E+04 |
| Cadmium                             | 0          | 4.0E+01 8.8E+00 | 8.8E+00                | 1        | 8.0E+01 | 4.4E+02               | 1       | 1.0E+01 | 2.2E+00                  | 1       | 2.0E+01 | 1.1E+02                     | 1        | 2.0E+01 | 1.1E+02                   | 1       |
| Carbon Tetrachloride <sup>C</sup>   | 0          | ı               | I                      | 4.4E+01  | E       | I.                    | 2.2E+03 | I.      | ı                        | 4.4E+00 | ĺ       | Ī                           | 2.2E+02  | ï       | ı                         | 2.2E+02 |
| Chlordane <sup>c</sup>              | 0          | 9.0E-02         | 9.0E-02 4.0E-03        | 2.2E-02  | 1.8E-01 | 2.0E-01               | 1.1E+00 | 2.3E-02 | 1.0E-03                  | 2.2E-03 | 4.5E-02 | 5.0E-02                     | 1.1E-01  | 4.5E-02 | 5.0E-02                   | 1.1E-01 |
| TRC                                 | 0          |                 |                        | 1        |         |                       | 1       | 1       | 1                        | 1       | 1       | 1                           | 1        | 1       | 1                         | ı       |
| Chlorine Prod. Oxidant              | 0          | 1.3E+01 7.5E+00 | 7.5E+00                | I        | 2.6E+01 | 3.8E+02               | E       | 3.3E+00 | 1.9E+00                  | ı       | 6.5E+00 | 9.4E+01                     | ı        | 6.5E+00 | 9.4E+01                   | 1       |

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| Parameter  | Background |                 | Water Quality Criteria | Criteria | Wast        | Wasteload Allocations | ations  | Antideo | Antidegradation Baseline | seline  | Antidea | Antidegradation Allocations | ocations | Mostli  | Most Limiting Allocations | cations |
|--|------------|-----------------|------------------------|----------|-------------|-----------------------|---------|---------|--------------------------|---------|---------|-----------------------------|----------|---------|---------------------------|---------|
| (ug/l unless noted)                                  | Conc.      | Acute           | Chronic                | Ŧ        | Acute       | Chronic               | Ŧ       | Acute   | Chronic                  | Ŧ       | Acute   | Chronic                     | Ŧ        | Acute   | Chronic                   | Ŧ       |
| Chlorobenzene  |            | Ē               | Ē                      | 2.1E+04  | 1           | ī                     | 1.1E+06 | 1       | 1                        | 2.1E+03 | 1       | 1                           | 1.1E+05  |         | 1                         | 1.1E+05 |
| Chlorodibromomethane <sup>c</sup>                    | 0          | 1               | 1                      | 3.4E+02  | 1           | 1                     | 1.7E+04 | 1       | 1                        | 3.4E+01 | ı       | I                           | 1.7E+03  | 1       | 1                         | 1.7E+03 |
| Chloroform <sup>C</sup>                              | 0          | 1               | 1                      | 2.9E+04  | 1           | 1                     | 1.5E+06 | ı       | ı                        | 2.9E+03 | I       | 1                           | 1.5E+05  | 1       | 1                         | 1.5E+05 |
| 2-Chloronaphthalene                                  | 0          | ŧ               | ī                      | 4.3E+03  | 1           | ţ                     | 2.2E+05 | 1       | 1                        | 4.3E+02 | 1       | 1                           | 2.2E+04  | 1       | 1                         | 2.2E+04 |
| 2-Chlorophenol                                       | 0          | 1               | ī                      | 4.0E+02  | 1           | 1                     | 2.0E+04 | 1       | 1                        | 4.0E+01 | 1       | I.                          | 2.0E+03  | £       | 1                         | 2.0E+03 |
| Chlorpyrifos   | 0          | 1.1E-02         | 5.6E-03                | ***      | 2.2E-02     | 2.8E-01               | l       | 2.8E-03 | 1.4E-03                  | Ĩ       | 5.5E-03 | 7.0E-02                     | 1        | 5.5E-03 | 7.0E-02                   | 1       |
| Chromium III   | 0          |                 |                        | ı        |             |                       | 1       | 1       | 1                        | 1       | 1       | 1                           | 1        | 1       | 1                         | ı       |
| Chromium VI  | 0          | 1.1E+03         | 5.0E+01                | 1        | 2.2E+03     | 2.5E+03               | 1       | 2.8E+02 | 1.3E+01                  | I       | 5.5E+02 | 6.3E+02                     | Î        | 5.5E+02 | 6.3E+02                   | ı       |
| Chrysene <sup>c</sup>                                | 0          | I               | I                      | 4.9E-01  | 1           | 1                     | 2.5E+01 | 1       | 1                        | 4.9E-02 | 1       | 1                           | 2.5E+00  | 1       | 1                         | 2.5E+00 |
| Copper   | 0          | 9.3E+00 6.0E+00 | 6.0E+00                | 1        | 1.9E+01     | 3.0E+02               | 1       | 2.3E+00 | 1.5E+00                  | 1       | 4.7E+00 | 7.5E+01                     | 1        | 4.7E+00 | 7.5E+01                   | 1       |
| Cyanide  | 0          | 1.0E+00         | 1.0E+00                | 2.2E+05  | 2.0E+00     | 5.0E+01               | 1.1E+07 | 2.5E-01 | 2.5E-01                  | 2.2E+04 | 5.0E-01 | 1.3E+01                     | 1.1E+06  | 5.0E-01 | 1.3E+01                   | 1.1E+06 |
| DDD c  | 0          | 1               | 1                      | 8.4E-03  | ţ           | I                     | 4.2E-01 | ı       | 1                        | 8.4E-04 | ï       | 1                           | 4.2E-02  | 1       | 1                         | 4.2E-02 |
| DDE c  | 0          | 1               | 1                      | 5.9E-03  | 1           | I                     | 3.0E-01 | 1       | 1                        | 5.9E-04 | 1       | 1                           | 3.0E-02  | 1       | 1                         | 3.0E-02 |
| DDT <sup>c</sup>                                     | 0          | 1.3E-01         | 1.0E-03                | 5.9E-03  | 2.6E-01     | 5.0E-02               | 3.0E-01 | 3.3E-02 | 2.5E-04                  | 5.9E-04 | 6.5E-02 | 1.3E-02                     | 3.0E-02  | 6.5E-02 | 1.3E-02                   | 3.0E-02 |
| Demeton  | 0          | I,              | 1.0E-01                | ī        | 1           | 5.0E+00               | 1       | I       | 2.5E-02                  | 1       | 1       | 1.3E+00                     | 1        | ŧ       | 1.3E+00                   | ,       |
| Dibenz(a,h)anthracene <sup>c</sup>                   | 0          | 1               | 1                      | 4.9E-01  | 1           | 1                     | 2.5E+01 | 1       | 3                        | 4.9E-02 | 1       | 1                           | 2.5E+00  | 1       | ı                         | 2.5E+00 |
| Dibutyl phthalate                                    | 0          | 1               | 1                      | 1.2E+04  | ı           | 1                     | 6.0E+05 | ı       | -                        | 1.2E+03 | I       | 1                           | 6.0E+04  | 1       | 1                         | 6.0E+04 |
| Dichloromethane (Methylene<br>Chloride) <sup>c</sup> | 0          | E               | ı                      | 1.6E+04  | 1           | E                     | 8.0E+05 | ı       | ŧ                        | 1.6E+03 | 1       | I                           | 8.0E+04  | 1       | 1                         | 8.0E+04 |
| 1,2-Dichlorobenzene                                  | 0          | 1               | 1                      | 1.7E+04  | 1           | 1                     | 8.5E+05 | I       | 1                        | 1.7E+03 | 1       | 3                           | 8.5E+04  | 1       | ı                         | 8.5F+04 |
| 1,3-Dichlorobenzene                                  | 0          | 1               | 1                      | 2.6E+03  | 1           | 1                     | 1.3E+05 | 1       | 1                        | 2.6E+02 | I       | F                           | 1.3E+04  | ı       | 1                         | 1.3E+04 |
| 1,4-Dichlorobenzene                                  | 0          | 1               | 1                      | 2.6E+03  | 1           | 1                     | 1.3E+05 | 1       | ı                        | 2.6E+02 | 1       | 1                           | 1.3E+04  | 1       | 1                         | 1.3E+04 |
| 3,3-Dichlorobenzidine <sup>c</sup>                   | 0          | 1               | ı                      | 7.7E-01  | 1           | 1                     | 3.9E+01 | 1       | 1                        | 7.7E-02 | 1       | 1                           | 3.9E+00  |         |                           |         |
| Dichlorobromomethane <sup>C</sup>                    | 0          |                 | 1                      | 4.6E+02  | 1           | I                     | 2.3E+04 | ı       | ı                        | 4.6E+01 | Ī       | Ē                           | 2.3E+03  | Ī       | ı                         | 2.3E+03 |
| 1,2-Dichloroethane c                                 | 0          | 1               | I                      | 9.9E+02  | ŧ           | ı                     | 5.0E+04 | ı       | 1                        | 9.9E+01 | ı       | ī                           | 5.0E+03  | 1       | ı                         | 5.0E+03 |
| 1,1-Dichloroethylene                                 | 0          | 1               | 1                      | 1.7E+04  | 1           | 1                     | 8.5E+05 | 1       | 1                        | 1.7E+03 | 1       | 1                           | 8.5E+04  | 1       | ı                         | 8.5E+04 |
| 1,2-trans-dichloroethylene                           | 0          | 1               | I                      | 1.4E+05  | E           | E                     | 7.0E+06 | E       | Ē                        | 1.4E+04 | Ĕ       | ı                           | 7.0E+05  | ţ       | ı                         | 7.0E+05 |
| 2,4-Dichlorophenol                                   | 0          | ı               | 1                      | 7.9E+02  | ı           | ı                     | 4.0E+04 | I       | 1                        | 7.9E+01 | I       | 1                           | 4.0E+03  | 1       | 1                         | 4.0E+03 |
| 1,2-Dichloropropane <sup>C</sup>                     | 0          | 1               | 1                      | 3.9E+02  | 1           | ı                     | 2.0E+04 | 1       | 1                        | 3.9E+01 | 1       | 1                           | 2.0E+03  | 1       | 1                         | 2.0E+03 |
| 1,3-Dichloropropene                                  | 0          | 1               | 1                      | 1.7E+03  | E           | ı                     | 8.5E+04 | E       | 1                        | 1.7E+02 | Į.      | ī                           | 8.5E+03  | ī       | ı                         | 8.5E+03 |
| Dieldrin <sup>c</sup>                                | 0          | 7.1E-01         | 1.9E-03                | 1.4E-03  | 1.4E+00     | 9.5E-02               | 7.0E-02 | 1.8E-01 | 4.8E-04                  | 1.4E-04 | 3.6E-01 | 2.4E-02                     | 7.0E-03  | 3.6E-01 | 2.4E-02                   | 7.0E-03 |
| Diethyl Phthalate                                    | 0          | ı               | 1                      | 1.2E+05  | 1           | 1                     | 6.0E+06 | 1       | 1                        | 1.2E+04 | 1       | 1                           | 6.0E+05  | 1       | 1                         | 6.0E+05 |
| Di-2-Ethylhexyl Phthalate <sup>c</sup>               | 0          | 1               | ľ                      | 5.9E+01  | E           | E                     | 3.0E+03 | F)      | 1                        | 5.9E+00 | į.      | ŧ                           | 3.0E+02  | ı       | ı                         | 3.0E+02 |
| 2,4-Dimethylphenol                                   | 0          | ł               | ı                      | 2.3E+03  | 1           | 1                     | 1.2E+05 | I       | I                        | 2.3E+02 | 1       | 1                           | 1.2E+04  | 1       | 1                         | 1.2E+04 |
| Dimethyl Phthalate                                   | 0          | 1               | 1                      | 2.9E+06  | 1           | 1                     | 1.5E+08 | 1       | 1                        | 2.9E+05 | 1       | 1                           | 1.5E+07  | 1       | 1                         | 1.5E+07 |
| Di-n-Butyl Phthalate                                 | 0          | 1               | 1                      | 1.2E+04  | 1           | ı                     | 6.0E+05 | 1       | Ē                        | 1.2E+03 | ı       | I                           | 6.0E+04  | £       | £                         | 6.0E+04 |
| 2,4 Dinitrophenol                                    | 0          | ř               | ŧ                      | 1.4E+04  | ī           | ŧ                     | 7.0E+05 | ī       | ī                        | 1.4E+03 | 1       | ì                           | 7.0E+04  | ı       | 1                         | 7.0E+04 |
| 2-Methyl-4,6-Dinitrophenol                           | 0          | 1               | 1                      | 7.65E+02 | 1           | 1                     | 3.8E+04 | 3       | 1                        | 7.7E+01 | 1       | ).                          | 3.8E+03  | 1       | 1                         | 3.8E+03 |
| 2,4-Dinitrotoluene <sup>c</sup><br>Dioxin (2,3,7,8-  | 0          | ï               | į.                     | 9.1E+01  | ī           | ı                     | 4.6E+03 | ſ       | ï                        | 9.1E+00 | ı       | 1                           | 4.6E+02  | ı       | 1                         | 4.6E+02 |
| (ppq)  | 0          | 1               | ı                      | 1.2E-06  | 1           | ī                     | 6.0E-05 | 1       | I                        | 1.2E-07 | 1       | 1                           | 6.0E-06  | ı       | 1                         | 6.0E-06 |
| 1,2-Diphenylhydrazine <sup>C</sup>                   | 0          | 1               | 1                      | 5.4E+00  | 1           | 1                     | 2.7E+02 | 1       | 1                        | 5.4E-01 | 3       | 1                           | 2.7E+01  | 1       | ı                         | 2.7E+01 |
| Alpha-Endosulfan                                     | 0          | 3.4E-02         | 8.7E-03                | 2.4E+02  | 6.8E-02     | 4.4E-01               | 1.2E+04 | 8.5E-03 | 2.2E-03                  | 2.4E+01 | 1.7E-02 | 1.1E-01                     | 1.2E+03  | 1.7E-02 | 1.1E-01                   | 1.2E+03 |
|  |            |                 |                        | NAC      | TO LEGISTRA | 0.0000                | 0       | T 0 11  | 141                      |         |         |                             |          |         |                           |         |

| Parameter  | Background |         | Water Quality Criteria | Criteria | Wast    | Wasteload Allocations | ations  | Antideg | Antidegradation Baseline | seline  | Antideg | Antidegradation Allocations | ocations | Most Li | Most Limiting Allocations | cations |
|--|------------|---------|------------------------|----------|---------|-----------------------|---------|---------|--------------------------|---------|---------|-----------------------------|----------|---------|---------------------------|---------|
| (ug/l unless noted)                              | Conc.      | Acute   | Chronic                | H        | Acute   | Chronic               | H       | Acute   | Chronic                  | Ŧ       | Acute   | Chronic                     | Ŧ        | Acute   | Chronic                   | 壬       |
| Beta-Endosulfan                                  | 0          | 3.4E-02 | 8.7E-03                | 2.4E+02  | 6.8E-02 | 4.4E-01               | 1.2E+04 | 8.5E-03 | 2.2E-03                  | 2.4E+01 | 1.7E-02 | 1.1E-01                     | 1.2E+03  | 1.7E-02 | 1.1E-01                   | 1.2E+03 |
| Endosulfan Sulfate                               | 0          | 1       | 1                      | 2.4E+02  | 1       | 1                     | 1.2E+04 | E       | Í                        | 2.4E+01 | I       | ı                           | 1.2E+03  | ı       | 1                         | 1.2E+03 |
| Endrin   | 0          | 3.7E-02 | 2.3E-03                | 8.1E-01  | 7.4E-02 | 1.2E-01               | 4.1E+01 | 9.3E-03 | 5.8E-04                  | 8.1E-02 | 1.9E-02 | 2.9E-02                     | 4.1E+00  | 1.9E-02 | 2.9E-02                   | 4.1E+00 |
| Endrin Aldehyde                                  | 0          | Ē       | I                      | 8.1E-01  | 1       | 1                     | 4.1E+01 | 3       | 1                        | 8.1E-02 | 1       | 1                           | 4.1E+00  | ı       | 1                         | 4.1E+00 |
| Ethylbenzene                                     | 0          | 1       | 1                      | 2.9E+04  | 1       | 1                     | 1.5E+06 | I       | ľ                        | 2.9E+03 | I       | 1                           | 1.5E+05  | 1       | 1                         | 1.5E+05 |
| Fluoranthene                                     | 0          | 1       | 1                      | 3.7E+02  | Ē       | Ē                     | 1.9E+04 | ı       | I                        | 3.7E+01 | 1       | 1                           | 1.9E+03  | 1       | 1                         | 1.9E+03 |
| Fluorene   | 0          | 1       | 1                      | 1.4E+04  | 1       | 1                     | 7.0E+05 | *       | 1                        | 1.4E+03 | 1       | 1                           | 7.0E+04  | t       | ı                         | 7.0E+04 |
| Guthion  | 0          | 1       | 1.0E-02                | ı        | Ē       | 5.0E-01               | 1       | 1       | 2.5E-03                  | 1       | ı       | 1.3E-01                     | ı        | ı       | 1.3E-01                   | 1       |
| Heptachlor <sup>c</sup>                          | 0          | 5.3E-02 | 3.6E-03                | 2.1E-03  | 1.1E-01 | 1.8E-01               | 1.1E-01 | 1.3E-02 | 9.0E-04                  | 2.1E-04 | 2.7E-02 | 4.5E-02                     | 1.1E-02  | 2.7E-02 | 4.5E-02                   | 1.1E-02 |
| Heptachlor Epoxide <sup>C</sup>                  | 0          | 5.3E-02 | 3.6E-03                | 1.1E-03  | 1.1E-01 | 1.8E-01               | 5.5E-02 | 1.3E-02 | 9.0E-04                  | 1.1E-04 | 2.7E-02 | 4.5E-02                     | 5.5E-03  | 2.7E-02 | 4.5E-02                   | 5.5E-03 |
| Hexachlorobenzene <sup>c</sup>                   | 0          | t       | 1                      | 7.7E-03  | t       | 1                     | 3.9E-01 | 1       | 1                        | 7.7E-04 | I       | 1                           | 3.9E-02  | 1       | 1                         | 3.9E-02 |
| Hexachlorobutadiene <sup>C</sup>                 | 0          | t       | 1                      | 5.0E+02  | Ī       | 1                     | 2.5E+04 | 1       | 1                        | 5.0E+01 | 1       | 1                           | 2.5E+03  | 1       | 1                         | 2.5E+03 |
| Hexachlorocyclohexane Alpha-<br>BHC <sup>c</sup> | 0          | 1       | 1                      | 1.3E-01  | 1       | I                     | 6.5E+00 | 1       | 1                        | 1.3E-02 | 3       | 1                           | 6.5E-01  | ı       | ı                         | 6.5F-01 |
| Hexachlorocyclohexane Beta-                      |            |         |                        |          |         |                       |         |         |                          |         |         |                             |          |         |                           |         |
| BHC  | 0          | 1       | T                      | 4.6E-01  | 1       | 1                     | 2.3E+01 | E       | Ü                        | 4.6E-02 | ľ       | ţ                           | 2.3E+00  | f       | 1                         | 2.3E+00 |
| Gamma-BHC <sup>c</sup> (Lindane)                 | 0          | 1.6E-01 | I                      | 6.3E-01  | 3.2E-01 | 1                     | 3.2E+01 | 4.0E-02 | 1                        | 6.3E-02 | 8.0E-02 | 1                           | 3.2E+00  | 8.0E-02 | 1                         | 3.2E+00 |
| Hexachlorocyclopentadiene                        | 0          | 1       | Ĩ                      | 1.7E+04  | 1       | Ī                     | 8.5E+05 | 1       | 1                        | 1.7E+03 | 1       | 3                           | 8.5E+04  | 1       | 1                         | 8.5E+04 |
| Hexachloroethane <sup>c</sup>                    | 0          | 1       | 1                      | 8.9E+01  | 1       | 1                     | 4.5E+03 | 1       | 1                        | 8.9E+00 | f       | I.                          | 4.5E+02  | Ē       | ī                         | 4.5E+02 |
| Hydrogen Sulfide                                 | 0          | ť       | 2.0E+00                |          | ı       | 1.0E+02               | ı       | I       | 5.0E-01                  | 0.0E+00 | 1       | 2.5E+01                     | 0.0E+00  | 1       | 2.5E+01                   | 1       |
| Indeno (1,2,3-cd) pyrene C                       | 0          | 1       | I                      | 4.9E-01  | ı       | 1                     | 2.5E+01 | I       | 1                        | 4.9E-02 | 1       | 1                           | 2.5E+00  | 1       | 1                         | 2.5E+00 |
| Isophorone <sup>C</sup>                          | 0          | 1       | 1                      | 2.6E+04  | 1       | 1                     | 1.3E+06 | 1       | ı                        | 2.6E+03 | I       | Į.                          | 1.3E+05  | 1       | 1                         | 1.3E+05 |
| Kepone   | 0          | ī       | 0.0E+00                | L        | ī       | 0.0E+00               | 1       | 1       | 0.0E+00                  | 1       | 1       | 0.0E+00                     | 1        | 1       | 0.0E+00                   | 1       |
| Lead   | 0          | 2.4E+02 | 9.3E+00                | 1        | 4.8E+02 | 4.7E+02               | 1       | 6.0E+01 | 2.3E+00                  | 1       | 1.2E+02 | 1.2E+02                     | 1        | 1.2E+02 | 1.2E+02                   | ı       |
| Malathion  | 0          | 1       | 1.0E-01                | 1        | 1       | 5.0E+00               | 1       | 1       | 2.5E-02                  | ı       | 1       | 1.3E+00                     | I        | ı       | 1.3E+00                   | ı       |
| Mercury  | 0          | 1.8E+00 | 9.4E-01                | 5.1E-02  | 3.6E+00 | 4.7E+01               | 2.6E+00 | 4.5E-01 | 2.4E-01                  | 5.1E-03 | 9.0E-01 | 1.2E+01                     | 2.6E-01  | 9.0E-01 | 1.2E+01                   | 2.6E-01 |
| Methyl Bromide                                   | 0          | į       | 1                      | 4.0E+03  | 1       | 1                     | 2.0E+05 | 1       | 3                        | 4.0E+02 | 1       | 1                           | 2.0E+04  | 1       | ŧ                         | 2.0E+04 |
| Methoxychlor                                     | 0          | 1       | 3.0E-02                | 1        | 1       | 1.5E+00               | 1       | Ī       | 7.5E-03                  | ı       | E       | 3.8E-01                     | ı        | 1       | 3.8E-01                   | 1       |
| Mirex  | 0          | I       | 0.0E+00                | ī        | 1       | 0.0E+00               | 1       | I       | 0.0E+00                  | 1       | 1       | 0.0E+00                     | 1        | ı       | 0.0E+00                   | 1       |
| Monochlorobenzene                                | 0          | 1       |                        | 2.1E+04  | 1       | I                     | 1.1E+06 | 1       | 1                        | 2.1E+03 | 1       | 1                           | 1.1E+05  | 1       | ŧ                         | 1.1E+05 |
| Nickel   | 0          | 7.4E+01 | 8.2E+00                | 4.6E+03  | 1.5E+02 | 4.1E+02               | 2.3E+05 | 1.9E+01 | 2.1E+00                  | 4.6E+02 | 3.7E+01 | 1.0E+02                     | 2.3E+04  | 3.7E+01 | 1.0E+02                   | 2.3E+04 |
| Nitrobenzene                                     | 0          | E       | 1                      | 1.9E+03  | 1       | 1                     | 9.5E+04 | I       | 1                        | 1.9E+02 | ī       | 1                           | 9.5E+03  | ı       | :                         | 9.5E+03 |
| N-Nitrosodimethylamine <sup>C</sup>              | 0          | 1       | 1                      | 8.1E+01  | 1       | 1                     | 4.1E+03 |         | 9                        | 8.1E+00 | 1       | 1                           | 4.1E+02  | 1       | 1                         | 4.1E+02 |
| N-Nitrosodiphenylamine <sup>c</sup>              | 0          | 1       | 1                      | 1.6E+02  | 1       | I                     | 8.0E+03 | Į.      | ľ                        | 1.6E+01 | Ü       | I                           | 8.0E+02  | I       | 1                         | 8.0E+02 |
| N-Nitrosodi-n-propylamine <sup>c</sup>           | 0          | E       | ŧ                      | 1.4E+01  | ŧ       | ı                     | 7.0E+02 | 1       | 1                        | 1.4E+00 | I       | 1                           | 7.0E+01  | ı       | ı                         | 7.0E+01 |
| Parathion  | 0          |         |                        | 1        |         |                       | 1       | 1       | 1                        | 1       | 1       | 1                           |          | 1       | 1                         | f       |
| PCB-1016   | 0          | 1       | 3.0E-02                | 1        | 1       | 1.5E+00               | ı       | L       | 7.5E-03                  | ı       | Ĩ       | 3.8E-01                     | Ţ.       | ŧ       | 3.8E-01                   | 1       |
| PCB-1221   | 0          | 1       | 3.0E-02                | ı        | 1       | 1.5E+00               | 1       | 1       | 7.5E-03                  | ı       | 1       | 3.8E-01                     | 1        | ;       | 3.8E-01                   | 1       |
| PCB-1232   | 0          | 1       | 3.0E-02                | 1        | 1       | 1.5E+00               | 1       | 1       | 7.5E-03                  | E       | į       | 3.8E-01                     | 1        | 1       | 3.8E-01                   | ı       |
| PCB-1242   | 0          | 0       | 3.0E-02                | ı        | Î.      | 1.5E+00               | I       | 1       | 7.5E-03                  | 1       | 1       | 3.8E-01                     | 1        | 1       | 3.8E-01                   | 1       |
| CB-1248  | 0          | 1       | 3.0E-02                | i        | 1       | 1.5E+00               |         | 1       | 7.5E-03                  | 3       | 1       | 3.8E-01                     | 1        | 1       | 3.8E-01                   | ı       |
| PCB-1254   | 0          | 1       | 3.0E-02                | 1        | 1       | 1.5E+00               | 1       | ı       | 7.5E-03                  | 1       | 1       | 3.8E-01                     | 1        | 1       | 3.8E-01                   | 1       |

| Parameter  | Background |                 | Water Quality Criteria | Criteria | Wast    | Wasteload Allocations | tions   | Antideg | Antidegradation Baseline | seline          | Antideg | Antidegradation Allocations | ocations | Most Lir | Most Limiting Allocations | ations  |
|--|------------|-----------------|------------------------|----------|---------|-----------------------|---------|---------|--------------------------|-----------------|---------|-----------------------------|----------|----------|---------------------------|---------|
| (ug/l unless noted)                              | Conc.      | Acute           | Chronic                | H        | Acute   | Chronic               | Ŧ       | Acute   | Chronic                  | Ŧ               | Acute   | Chronic                     | Ξ        | Acute    | Chronic                   | 壬       |
| PCB-1260   | 0          | 1               | 3.0E-02                | 1        | 1       | 1.5E+00               | 1       | 1       | 7.5E-03                  | l)              | ij      | 3.8E-01                     | 1        | ı        | 3.8E-01                   |         |
| PCB Total <sup>c</sup>                           | 0          | E               | ı                      | 1.7E-03  | F       | Ţ                     | 8.5E-02 | ı       | Ĩ                        | 1.7E-04         | 1       | 1                           | 8.5E-03  | ı        | 1                         | 8.5E-03 |
| Pentachlorophenol <sup>c</sup>                   | 0          | 1.3E+01         | 1.3E+01 7.9E+00        | 8.2E+01  | 2.6E+01 | 4.0E+02               | 4.1E+03 | 3.3E+00 | 2.0E+00                  | 8.2E+00 6.5E+00 | 6.5E+00 | 9.9E+01                     | 4.1E+02  | 6.5E+00  | 9.9E+01                   | 4.1E+02 |
| Phenol   | 0          | 1               | 1                      | 4.6E+06  | 1       | ı                     | 2.3E+08 | I       | I                        | 4.6E+05         | Ĺ       | 1                           | 2.3E+07  | ī        | 1                         | 2.3E+07 |
| Phosphorus (Elemental)                           | 0          | L               | 0.1                    | ı        | ı       | 5.0E+00               | 1       | 1       | 2.5E-02                  | 1               | I       | 1.3E+00                     | 1        | 1        | 1.3E+00                   | 1       |
| Pyrene<br>Padioniclides (nCill                   | 0          | 1               | 1                      | 1.1E+04  | 1       | 1                     | 5.5E+05 | 1       | ī                        | 1.1E+03         | 1       | 1                           | 5.5E+04  | 1        | 1                         | 5.5E+04 |
| except Beta/Photon)                              | 0          | 1               | 1                      | 1        | 1       | 1                     | 1       | 1       | 1                        | 1               | 1       | 1                           | 1        | 1        | 1                         | ;       |
| Gross Alpha Activity<br>Beta and Photon Activity | 0          | 1               | 1                      | 1.5E+01  | 1       | ı                     | 7.5E+02 | ı       | ı                        | 1.5E+00         | ı       | 1                           | 7.5E+01  | ı        | :                         | 7.5E+01 |
| (mrem/yr)  | 0          | ı               | E                      | 4.0E+00  | E       | £                     | 2.0E+02 | £       | ī                        | 4.0E-01         | ţ       | 1                           | 2.0E+01  | 1        | ŧ                         | 2.0E+01 |
| Strontium-90                                     | 0          | ı               | ı                      | 8.0E+00  | 1       | 1                     | 4.0E+02 | 1       | 1                        | 8.0E-01         | ı       | 1                           | 4.0E+01  | 1        | ;                         | 4.0E+01 |
| Tritium  | 0          | 3               | 3                      | 2.0E+04  | 1       | ı                     | 1.0E+06 | 1       | 1                        | 2.0E+03         | 1       | 1                           | 1.0E+05  | 1        | 1                         | 1.0E+05 |
| Selenium   | 0          | 3.0E+02 7.1E+01 | 7.1E+01                | 1.1E+04  | 6.0E+02 | 3.6E+03               | 5.5E+05 | 7.5E+01 | 1.8E+01                  | 1.1E+03 1.5E+02 | 1.5E+02 | 8.9E+02                     | 5.5E+04  | 1.5E+02  | 8.9E+02                   | 5.5E+04 |
| Silver   | 0          | 2.0E+00         | 1                      | ı        | 4.0E+00 | ı                     | ī       | 5.0E-01 | 1                        | 3               | 1.0E+00 | ı                           | 1        | 1.0E+00  | 1                         | ı       |
| 1,1,2,2-Tetrachloroethane <sup>C</sup>           | 0          | 1               | 1                      | 1.1E+02  | 1       | 1                     | 5.5E+03 | 1       | 1                        | 1.1E+01         | 1       | 1                           | 5.5E+02  | ı        | ŧ                         | 5.5E+02 |
| Tetrachloroethylene <sup>c</sup>                 | 0          | ı               | I                      | 8.9E+01  | 1       | 1                     | 4.5E+03 | E       | ı                        | 8.9E+00         | I       | ı                           | 4.5E+02  | I        | :                         | 4.5E+02 |
| Thallium   | 0          | 1               | 1                      | 6.3E+00  | 1       | 1                     | 3.2E+02 | 1       | 1                        | 6.3E-01         | 1       | I                           | 3.2E+01  | 1        | 3                         | 3.2E+01 |
| Toluene  | 0          | 1               | 1                      | 2.0E+05  | 1       | 1                     | 1.0E+07 | 1       | 1                        | 2.0E+04         | 1       | f                           | 1.0E+06  | 1        | 1                         | 1.0E+06 |
| Toxaphene <sup>c</sup>                           | 0          | 2.1E-01         | 2.0E-04                | 7.5E-03  | 4.2E-01 | 1.0E-02               | 3.8E-01 | 5.3E-02 | 5.0E-05                  | 7.5E-04         | 1.1E-01 | 2.5E-03                     | 3.8E-02  | 1.1E-01  | 2.5E-03                   | 3.8E-02 |
| Tributyltin                                      | 0          | 3.8E-01         | 1.0E-03                | 3        | 7.6E-01 | 5.0E-02               | 1       | 9.5E-02 | 2.5E-04                  | 1               | 1.9E-01 | 1.3E-02                     | ì        | 1.9E-01  | 1.3E-02                   | 1       |
| 1,2,4-Trichlorobenzene                           | 0          | ı               | ı                      | 9.4E+02  | I       | ľ                     | 4.7E+04 | Ē       | Ĺ                        | 9.4E+01         | I       | I                           | 4.7E+03  | (        | ı                         | 4.7E+03 |
| 1,1,2-Trichloroethane <sup>c</sup>               |            | ı               | 1                      | 4.2E+02  | 1       | Ī                     | 2.1E+04 | 1       | 1                        | 4.2E+01         | 1       | 1                           | 2.1E+03  | ı        | 1                         | 2.1E+03 |
| Trichloroethylene <sup>C</sup>                   | 0          | 1               | 1                      | 8.1E+02  | 1       | 1                     | 4.1E+04 | 1       | 1                        | 8.1E+01         | 1       | 1                           | 4.1E+03  | 1        | 1                         | 4.1E+03 |
| 2,4,6-Trichlorophenol <sup>C</sup>               | 0          | I               | 1                      | 6.5E+01  | ı       | 1                     | 3.3E+03 | Ī       | I                        | 6.5E+00         | £       | I                           | 3.3E+02  | ł        | 1                         | 3.3E+02 |
| Vinyl Chloride <sup>c</sup>                      | 0          | ı               | 1                      | 6.1E+01  | i       | ī                     | 3.1E+03 | ı       | I                        | 6.1E+00         | 1       | ļ                           | 3.1E+02  | ı        | 1                         | 3.1E+02 |
| Zinc   | 0          | 9.0E+01 8.1E+01 | 8.1E+01                | 6.9E+04  | 1.8E+02 | 4.1E+03               | 3.5E+06 | 2.3E+01 | 2.0E+01                  | 6.9E+03 4.5E+01 | 4.5E+01 | 1.0E+03                     | 3.5E+05  | 4.5E+01  | 1.0E+03                   | 3.5E+05 |

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- 1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- 2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
- 3. Metals measured as Dissolved, unless specified otherwise
- 4. "C" indicates a carcinogenic parameter
- 5. For transition zone waters, spreadsheet prints the lesser of the freshwater and saltwater water quality criteria.
- 6. Regular WLA = (WQC x WLA multiplier) (WLA multiplier 1)(background conc.)
- 7. Antideg. Baseline = (0.25(WQC background conc.) + background conc.) for acute and chronic = (0.1(WQC - background conc.) + background conc.) for human health
- 8. Antideg. WLA = (Antideg. Baseline)(WLA multiplier) (WLA multiplier 1)(background conc.)

|              | Site Specific       |       |
|--------------|---------------------|-------|
| Metal        | Target Value (SSTV) |       |
| Antimony     | 2.2E+04             | Note: |
| Arsenic III  | 1.4E+01             | minim |
| Cadmium      | 8.0E+00             |       |
| Chromium III | #VALUE!             |       |
| Chromium VI  | 2.2E+02             |       |
| Copper       | 1.9E+00             |       |
| Lead         | 4.8E+01             |       |
| Mercury      | 2.6E-01             |       |
| Nickel       | 1.5E+01             |       |
| Selenium     | 6.0E+01             |       |
| Silver       | 4.0E-01             |       |
| Zinc         | 1.8E+01             |       |

| tal    | Target Value (SSTV) |  |
|--------|---------------------|--|
| Уп     | 2.2E+04             | Note: do not use QL's lower than the     |
| = ::   | 1.4E+01             | minimum QL's provided in agency guidance |
| E      | 8.0E+00             |  |
| III Wn | #VALUE!             |  |
| IV mu  | 2.2E+02             |  |
|        | 1.9E+00             |  |
|        | 4.8E+01             |  |
| >      | 2.6E-01             |  |
|        | 1.5E+01             |  |
| Ε      | 6.0E+01             |  |
|        | 4.0E-01             |  |
|        | L                   |  |

# MSTRANTI DATA SOURCE REPORT

| Stream Information:                     |  |
|---|--|
| Mean Salinity                           | Carter's Creek 3-CTR001.06   |
| 90% Temperature                         | Carter's Creek 3-CTR001.06   |
| 90% and 10% Maximum pH                  | Carter's Creek 3-CTR001.06   |
| Tier Designation                        | Default assumption, Tier 2.  |
| Stream Flows                            |  |
| All Data                                | The receiving stream is saltwater tidal. The default dilution ratios are appropriate for this facility's discharges as they are all shore-based. |
| Effluent Information: Ampro Shipyard Ap | plication Information  |
| Mean Hardness                           | NA for saltwater discharges (25 mg/l assumed).   |
| Temperature                             | 72 deg F = 22 deg C  |
| Maximum pH P <sub>90</sub>              | 2C application, 8.1  |
| Maximum pH P <sub>10</sub>              | 2C application, pH min., 8.1   |
| Discharge Flow                          | 21,600 gpd = Avg of flows reported for TMP tests   |

| Parameter                   | Date     | Result | Date    | Result | Date    | Result                | Units |
|-----------------------------|----------|--------|---------|--------|---------|-----------------------|-------|
| Copper,<br>dissolved        | 12/16/05 | 280    | 6/20/07 | 1700   | 9/27/07 | 140 (clean technique) | ug/l  |
| Lead, dissolved             | ш        | <10    | tt      | 17     | и       |                       | ug/l  |
| Zinc, dissolved             | "        | 110    | ii.     | 560    | 44      | 70 (clean technique)  | ug/l  |
| Arsenic                     | 6/25/07  | 120    |         |        |         |                       | ug/l  |
| Chromium                    | (44      | 54     |         |        |         |                       | ug/l  |
| Selenium                    | 66       | 12     |         |        |         |                       | ug/l  |
| Ammonia                     | и        | 0.36   |         |        |         |                       | mg/l  |
| NOx                         | и        | 0.22   |         |        |         |                       | mg/l  |
| Total Organic<br>Carbon TOC | 12/16/05 | 1.5    | 6/20/07 | 2.74   |         |                       | mg/l  |
| Total Phos-<br>phorus       | ű        | 1.4    |         |        |         |                       | mg/l  |
| Tot.Suspended<br>Solids     | 12/16/05 | 2.0    | 6/20/07 | 14     |         |                       | mg/l  |
| Bis(2-ethylhexyl) phthalate | и        | 5.0    |         |        |         |                       | ug/l  |

| Parameter | Date    | Result | Units | Acute Std | 2x Acute Std | Greater than 2x Acute Std? |
|-----------|---------|--------|-------|-----------|--------------|----------------------------|
| Cyanide   | 1-18-07 | 10     | ug/L  | 0.5       | 1.0          | Υ                          |
| Nitrate-N | ш       | 810    | ug/L  | none      |              |                            |
| NOx       | it      | 810    | ug/L  | none      |              |                            |
| Sulfide   | ££      | 1200   | ug/L  | none      |              |                            |
| Antimony  | tt      | 6.3    | ug/L  | none      |              |                            |
| Arsenic   | ii      | 3.3    | ug/L  | 35        | 70           | N                          |
| Cadmium   | 14      | 1.3    | ug/L  | 20        | 40           | N                          |
| Copper    | ii      | 2.6    | ug/L  | 4.7       | 7.0          | N                          |
| Lead      | ii      | 45     | ug/L  | 120       | 240          | N                          |
| Zinc      | и       | 130    | ug/L  | 45        | 90           | Υ                          |
| Silver    | 44      | 1.8    | ug/L  | 1.0       | 2.0          | N                          |

| Parameter | Date    | Result | Units | Acute<br>Std | 2x Acute<br>Std | Greater<br>than 2x<br>Acute Std? |
|-----------|---------|--------|-------|--------------|-----------------|----------------------------------|
| Cyanide   | 1-18-07 | 20     | ug/L  | 0.50         | 1.0             | Y                                |
| Nitrate-N | и       | 1120   | tt .  | none         |                 |                                  |
| Nitrite-N | и       | 20     | 66    | none         |                 |                                  |
| Sulfide   | u       | 1000   | 44    | none         |                 |                                  |
| Antimony  | ti .    | 5.7    | ш     | none         |                 |                                  |
| Arsenic   | is .    | 3.5    | и     | 35           | 70              | N                                |
| Cadmium   | и       | 1.3    | 66    | 20           | 40              | N                                |
| Copper    | 11      | 44     | ш     | 4.7          | 7               | Υ                                |
| Zinc      | п       | 180    | и     | 45           | 90              | Y                                |

| Parameter         | Date   | Result | Units | Acute Std | 2x Acute<br>Std | Greater<br>than 2x<br>Acute<br>Std? |
|-------------------|--------|--------|-------|-----------|-----------------|-------------------------------------|
| Cyanide           | 1-9-07 | 30     | ug/L  | 0.5       | 1.0             | Y                                   |
| Nitrate-N         | 44     | 1150   | и     | none      |                 |                                     |
| NOx               | í í    | 1150   | tt    | none      |                 |                                     |
| Ammonia           | ii     | 220    | tt    | 1.1       | 2.2             | Υ                                   |
| Total<br>Nitrogen | EE.    | 1150   | II    | none      |                 |                                     |
| Sulfide           | ш      | 3000   | и     | none      |                 |                                     |
| Arsenic           | 41     | 2      | и     | 35        | 70              | N                                   |
| Copper            | и      | 15     | 11    | 4.7       | 7.0             | Y                                   |
| Zinc              | tt     | 56     | и     | 45        | 90              | N                                   |
| Silver            | tt     | 1      | ш     | 1         | 2               | N                                   |

### 11/28/2007 8:59:29 AM

```
Facility = Ampro Shipyard
Chemical = Copper, dissolved
Chronic averaging period = 4
WLAa = 4.7 ug/l
WLAc = 75 ug/l
Q.L. = 4 ug/l
# samples/mo. = 1
# samples/wk. = 1
```

# Summary of Statistics:

```
# observations = 3

Expected Value = 706.666

Variance = 179776

C.V. = 0.6

97th percentile daily values = 1719.61

97th percentile 4 day average = 1175.74

97th percentile 30 day average = 852.277

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data
```

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 4.7 ug/l
Average Weekly limit = 4.7000000000001
Average Monthly LImit = 4.70000000000001

### The data are:

280 ug/l 1700 140

A copper limit analysis was also performed with the clean metals data only, which confirmed the need for a limit.

# 11/28/2007 9:00:42 AM

Facility = Ampro Shipyard
Chemical = Copper, dissolved--Clean Metals
Chronic averaging period = 4
WLAa = 4.7 ug/l
WLAc = 75 ug/l
Q.L. = 4 ug/l
# samples/mo. = 1
# samples/wk. = 1

# Summary of Statistics:

# observations = 1

Expected Value = 140

Variance = 7056

C.V. = 0.6

97th percentile daily values = 340.678

97th percentile 4 day average = 232.930

97th percentile 30 day average = 168.847

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 4.7 ug/l
Average Weekly limit = 4.7 ug/l
Average Monthly Llmit = 4.7 ug/l

The data are:

140 ug/l

Clean Metals Analysis

### 11/28/2007 9:03:45 AM

Facility = Ampro Shipyard
Chemical = Lead, Dissolved
Chronic averaging period = 4
WLAa = 120 ug/l
WLAc = 120 ug/l
Q.L. = 9 ug/l
# samples/mo. = 1
# samples/wk. = 1

# Summary of Statistics:

# observations = 2

Expected Value = 10.4957

Variance = 39.6576

C.V. = 0.6

97th percentile daily values = 25.5404

97th percentile 4 day average = 17.4626

97th percentile 30 day average = 12.6583

# < Q.L. = 1

Model used = BPJ Assumptions, Type 1 data

No Limit is required for this material

The data are:

0 entered as <10 ug/l 17 ug/l

#### 11/28/2007 9:04:49 AM

```
Facility = Ampro Shipyard
Chemical = Lead, dissolved
Chronic averaging period = 4
WLAa = 120 ug/l
WLAc = 120 ug/l
Q.L. = 10 ug/l
# samples/mo. = 1
# samples/wk. = 1
```

# Summary of Statistics:

```
# observations = 1

Expected Value = 17

Variance = 104.04

C.V. = 0.6

97th percentile daily values = 41.3680

97th percentile 4 day average = 28.2844

97th percentile 30 day average = 20.5029

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data
```

No Limit is required for this material

The data are:

17 ug/l

Repeated analysis for lead without "less than" value—no limit necessary

### 11/28/2007 9:06:16 AM

```
Facility = Ampro Shipyard
Chemical = Zinc, dissolved
Chronic averaging period = 4
WLAa = 45 ug/l
WLAc = 1000 ug/l
Q.L. = 10 ug/l
# samples/mo. = 1
# samples/wk. = 1
```

# Summary of Statistics:

```
# observations = 3

Expected Value = 246.666

Variance = 21904

C.V. = 0.6

97th percentile daily values = 600.242

97th percentile 4 day average = 410.401

97th percentile 30 day average = 297.493

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data
```

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 45 ug/l
Average Weekly limit = 45 ug/l
Average Monthly Llmit = 45 ug/l

## The data are:

110 ug/l 560 ug/l 70 ug/l

Zinc limit analysis was also performed with the clean metals analysis only, which confirmed the need for a limit.

### 11/28/2007 9:07:11 AM

Facility = Ampro Shipyard
Chemical = Zinc, dissolved
Chronic averaging period = 4
WLAa = 45 ug/l
WLAc = 1000 ug/l
Q.L. = 10 ug/l
# samples/mo. = 1
# samples/wk. = 1

# Summary of Statistics:

# observations = 1

Expected Value = 70

Variance = 1764

C.V. = 0.6

97th percentile daily values = 170.339

97th percentile 4 day average = 116.465

97th percentile 30 day average = 84.4237

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 45 ug/l
Average Weekly limit = 45 ug/l
Average Monthly LImit = 45 ug/l

The data are:

70 ug/l

Clean Metals Analysis

#### 11/28/2007 9:08:37 AM

```
Facility = Ampro Shipyard
Chemical = Arsenic (Total)
Chronic averaging period = 4
WLAa = 35 ug/l
WLAc = 450 ug/l
Q.L. = 10 ug/l
# samples/mo. = 1
# samples/wk. = 1
```

# Summary of Statistics:

```
# observations = 1

Expected Value = 120

Variance = 5184

C.V. = 0.6

97th percentile daily values = 292.010

97th percentile 4 day average = 199.654

97th percentile 30 day average = 144.726

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data
```

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 35 ug/l
Average Weekly limit = 35 ug/l
Average Monthly Llmit = 35 ug/l

The data are:

120 ug/l

This analysis was performed with total recoverable arsenic, which indicates a limit is necessary. However, DEQ guidance does not allow establishing a limit based on total recoverable data. Therefore monitoring is being required for dissolved arsenic in this permit action. If the data show a problem, DEQ has the authority to re-open the permit for modification or revoke and reissuance at any time prior to expiration.

### 6/2/2008 5:16:28 PM

Facility = Ampro Shipyard
Chemical = Ammonia
Chronic averaging period = 30
WLAa = 0.86 mg/l
WLAc = 0.96 mg/l
Q.L. = 0.2 mg/l
# samples/mo. = 1
# samples/wk. = 1

# Summary of Statistics:

# observations = 1

Expected Value = .36

Variance = .046656

C.V. = 0.6

97th percentile daily values = .876030

97th percentile 4 day average = .598964

97th percentile 30 day average = .434179

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 0.86 mg/l
Average Weekly limit = 0.86 mg/l
Average Monthly Llmit = 0.86 mg/l

The data are:

0.36 mg/l

# 11/28/2007 10:43:20 AM

Facility = Ampro Shipyard
Chemical = Selenium, total
Chronic averaging period = 4
WLAa = 150 ug/l
WLAc = 890 ug/l
Q.L. = 10 ug/l
# samples/mo. = 1
# samples/wk. = 1

# Summary of Statistics:

# observations = 1

Expected Value = 12

Variance = 51.84

C.V. = 0.6

97th percentile daily values = 29.2010

97th percentile 4 day average = 19.9654

97th percentile 30 day average = 14.4726

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

12 ug/l

#### 11/28/2007 10:42:01 AM

```
Facility = Ampro Shipyard
Chemical = chromium, total
Chronic averaging period = 4
WLAa = 550 ug/l
WLAc = 630 ug/l
Q.L. = 10 ug/l
# samples/mo. = 1
# samples/wk. = 1
```

# Summary of Statistics:

```
# observations = 1

Expected Value = 54

Variance = 1049.76

C.V. = 0.6

97th percentile daily values = 131.404

97th percentile 4 day average = 89.8446

97th percentile 30 day average = 65.1268

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data
```

No Limit is required for this material

The data are:

54 ug/l

Wasteload allocations for chromium VI were used as they are more stringent.

# ATTACHMENT D

# VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Piedmont Regional Office
WASTEWATER FACILITY INSPECTION REPORT

FACILITY NAME: AMPRO Shipyard INSPECTOR: Heather A. Horne

PERMIT No.: VA0089303 INSPECTION DATE: April 3, 2007 (1351-1526)

TYPE OF FACILITY: Industrial - Minor/Small REPORT COMPLETED: April 27, 2007

COUNTY: Lancaster UNANNOUNCED INSPECTION: YES

PRESENT DURING INSPECTION: Lynn Havnie

## I. OPERATIONAL UNIT REVIEW AND CONDITION:

Facility consists of one marine railway with a covered deck. Also on site: separate paint and petroleum products containment areas, and a maintenance shop.

## Marine Railway

A Crandall Marine Rail is used to haul boats from the water. The rail deck is covered (boarded) and the lower area of the haul system has a concrete curb that helps retain debris from entering the water. Fabric absorbent booms are in place behind the rail when the rail is in use. One boat was on the rail during the inspection. Pressure washing was taking place during the inspection. Sandblasting of ships occurs 2-3 times per year. During sandblasting operations Ms. Haynie said the shrouds are pulled to surround the marine rail. The marine rail is swept and vacuumed to remove debris prior to launching boats. Recovered sand blast medium is placed in containers that are periodically shipped back to the supplier. The area was reasonably clean, but sand blast material was observed on the ground in one small area. Ms. Haynie said this material would be removed as soon as possible to prevent material from entering stormwater.

#### Paint Containment Area

Paint inventory is stored indoors. Mixing and pouring of paint is done in a small shed building with a curbed outdoor area. There is a drain in the corner of this area; however it did not appear any material had left the drain. The floor of the building is an open grate where paint cans are turned upside to drain onto the ground beneath the building. Paint had flowed out from under the building onto the ground (see photograph). Paint did not leave the property, nor enter the receiving stream. Five-gallon containers are the largest used on the marine rail. The inspector recommended possibly utilizing buckets or drums covered with a grate to drain paint cans.

#### Wet Slips

Several slips are available where in-water maintenance and sometimes top-side painting with brushes occurs. One vessel was at the dock at the time of the inspection. Erosion damage has occurred behind the existing bulkhead adjacent to the wetslip. The facility has plans to correct this damage, replant grass, and replace straw bales in this area.

#### New Dock

A new 100 foot long dock is located onsite adjacent to the dirt dock. The facility is considering extending the dock to 500 feet and installing a travel lift. Minor shore erosion is occurring between the dirt dock and the new dock. The inspector suggested placing heavy stone and/or planting grass in this area.

#### Petroleum Containment Area

Several 500 gallon above ground storage tanks (ASTs) are located within a concrete containment area. There is a drain/discharge pipe in the corner of this area. There was a blackened minor stained area of the ground below the discharge pipe. Some sandblast material was located in the bottom of the secondary containment. Ms. Haynie was not aware of any petroleum release from this area and the inspector hypothesized that the dark stained area was probably sandblast material.

#### Diesel Shop

Engine and equipment maintenance/repair is performed inside the diesel shop building. Tools are now taken off-site for acid cleaning. Filters and other oily materials are allowed to drain to an underground holding tank located just outside of the shop. The holding tank is periodically pumped and hauled by a contractor. This contractor also accepts used booms, parts, and filters.

#### Power Block Shop

No longer in operation. Now used for parts storage.

#### Stormwater

Two stormwater runoff areas adjacent to the marine rail (one on each side, 002 and 003). One stormwater runoff area is adjacent to the dirt dock (007). Another stormwater runoff area is at the east side of the yard at the right side of the railway (901). The Stormwater Pollution Prevention Plan (SWPPP) was not located onsite at the time of inspection. The inspector e-mailed Ms. Haynie a SWPPP template to aid in the development of her plan. Forms for conducting quarterly and annual visual site evaluations were provided at the time of inspection.

### Monitoring and Reporting

The facility conducts annual toxicity testing from marine railway run-off. Best management practices are evaluated weekly and submitted to DEQ monthly.

Outfall 001 is process water runoff from the cradle and is sampled every six months.

Outfall 901 is stormwater runoff from the cradle and is sampled every six months.

Outfall 007 is a representative stormwater outfall that is sampled once/year.

Ms. Haynie indicated some confusion about DMR calculation and completion. The inspector offered to complete a sample DMR calculation and completion utilizing the facility's sample data. At the time of this report, 2006 sample data had not been received by this office in order to perform sample calculations.

# Spill Prevention/Response

A mobile waste oil tank is maintained adjacent to the marine railway. In case of spill, material collected in the concrete curb area would be pumped to the mobile tank and hauled by a contractor. Several other empty tanks are maintained onsite and could be utilized for pump and haul in the event of a spill. The facility maintains a large number of booms and other petroleum absorbent materials. Ms. Haynie stated that AMPRO acts as a resource center, stocking petroleum absorbent materials for other facilities and the local fire department to utilize during emergencies. Petro-Chem accepts waste oil from the ships.

#### II. ULTIMATE DISPOSAL OF SOLIDS:

Recovered sand blast material is placed in original shipping containers and returned to Virginia Materials.

#### III. FIELD DATA:

Flow: N/A MGD Dissolved Oxygen: N/A mg/L Contact Chlorine Res.: N/A mg/L

pH: N/A S.U. Final Chlorine Res.: N/A mg/L Temperature: N/A °C

Calibration Time/Initials/documentation: N/A

Condition of Effluent: N/A (no discharge observed during inspection)

Condition of Receiving Stream: There was no evidence of shipyard debris, paint chips or sand blast material

on the bottom below the marine railway. No sheen or floating material

observed on water's surface.

Samples Collected during the inspection: No

# IV. PLANT OPERATIONS AND MAINTENANCE:

Operations and Maintenance Manual:

March 5, 1997 DEQ Approval, also Shipyard Best Management Practices (BMP) are Special Condition of Permit.

Class and Number of Licensed Operators:

N/A

Alarm Systems and Alternate Power:

Any bypassing since last inspection?

When was the RPZ device last checked?

N/A

Name, number and description of pump stations:

N/A

# V. COMMENTS:

Items evaluated during this inspection include (check all that apply):

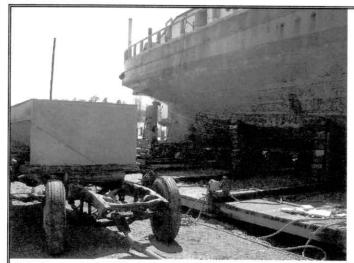
| [x] Yes [] No |         | Operational Units                                |
|---------------|---------|--|
| [] Yes [x] No |         | O & M Manual                                     |
| [] Yes [] No  | [x] N/A | Maintenance Records                              |
| [] Yes [] No  | [x] N/A | Pathogen Reduction & Vector Attraction Reduction |
| []Yes []No    | [x] N/A | Sludge Disposal Plan                             |
| []Yes []No    | [x] N/A | Groundwater Monitoring Plan                      |
| [] Yes [x] No | [] N/A  | Storm Water Pollution Prevention Plan            |
| [x] Yes [] No | [] N/A  | Permit Special Conditions                        |
| []Yes []No    | [x] N/A | Permit Water Quality Chemical Monitoring         |
| []Yes [X]No   | [] N/A  | Laboratory Records                               |
|               |         |  |

# VI. GENERAL COMMENTS/RECOMMENDATIONS:

- 1. As a reminder, do not release any contaminated materials from the petroleum containment area onto the ground. The pipe leaving this area may need to be repaired to prevent discharge in case of an accidental spill.
- 2. Minor housekeeping issues were noted. Please remove the dried paint leaving the paint room shed, sandblast material in the petroleum secondary containment, and sandblast material on the ground near the marine railway.
- 3. Overall, the facility appeared to be in good condition. Ms. Haynie appeared to be very concerned and conscientious about environmental quality.

# VII. COMPLIANCE RECOMMENDATIONS:

- The Stormwater Pollution Prevention Plan (SWPPP) was not present at the time of inspection. Please utilize the e-mailed template to create your SWPPP and submit a copy to DEQ upon completion.
- 2. Please complete Quarterly and Annual visual site evaluations and keep onsite with the SWPPP. Forms for this purpose were provided during the inspection.
- 3. Discharge Monitoring Reports (DMRs) must be completed and submitted in a timely manner. The last DMR in DEQ files was submitted in 2005. In an e-mail dated 4/12/07, the inspector requested Ms. Haynie submit 2006 sampling data. Ms. Haynie replied and stated a package would be sent containing this information. At the time of this report, the information had not been received.



Photograph 1: Marine railway



Photograph 2: Shroud for sandblasting protection (vicinity of Outfall 001/901)



Photograph 3: Mobile waste oil containment



Photograph 4: Sandblast material on ground



Photograph 5: Oil being drained inside shop.



Photograph 6: Secondary containment stain (note: sandblast material in upper left hand corner)



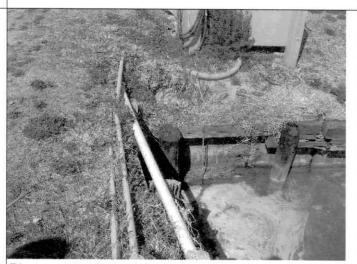
Photograph 7: Dried paint flowing from under containment area



Photograph 8: Spill kits located onsite



Photograph 9: Bulkhead in need of repair



Photograph 10: Vicinity of Outfall 007 (note: pollen in water)



Photograph 11: Wet slip



Photograph 12: New dock; possibly future site of traveling lift

# **ATTACHMENT E**

#### NPDES PERMIT RATING WORK SHEET X Regular Addition DiscretionaryAddition NPDES NO. VA0089303 Score change, but no status change Deletion Facility Name: Ampro Shipyard City: Weems, Va. Receiving Water: Carter's Creek Reach Number: Is this facility a steam electric power plant (SIC=4911) with one or more Is this permit for a municipal separate storm sewer serving a population of the following characteristics? greater than 100,000? 1. Power output 500 MW or greater (not using a cooling pond/lake) 2. A nuclear power plant ☐ YES; score is 700 (stop here) 3. Cooling water discharge greater than 25% of the receiving stream's X NO (continue) 7Q10 flow rate YES; score is 600 (stop here) X NO (continue) **FACTOR 1: Toxic Pollutant Potential** PCS SIC Code: 3732 Primary SIC Code: 3732 Other SIC Codes: NA Industrial Subcategory Code: 99 \_\_\_\_ (Code 000 if no subcategory) Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one) Toxicity Group Code Points Toxicity Group Code **Points** Toxicity Group Code Points ☐ No process waste streams 0 0 3. 3 15 7. 7 35 1.no 5 4. 1 4 20 8. 8 40 electroplating **2**. 2 10 5. 5 25 X 9. 9 45 6. 6 30 10. 10 50 Code Number Checked: 1 Total Points Factor 1: 5 FACTOR 2: Flow/Stream Flow Volume (Complete either Section A or Section B; check only one) Section A x□ Wastewater Flow Only Considered Section B Wastewater and Stream Flow Considered Wastewater Type Code Points Wastewater Type Percent of instream Wastewater Concentration (See Instructions) (See Instructions) at Receiving Stream Low Flow Type I: Flow < 5 MGD 0 11 Flow 5 to 10 MGD 12 10 Code Points Flow > 10 to 50 MGD 13 20 Flow > 50 MGD 14 30 Type I/III: < 10 % 41 0 Type II: Flow < 1 MGD 21 X 10 10 % to < 50 % 42 10 Flow 1 to 5 MGD 22 20 Flow > 5 to 10 MGD 23 30 > 50 % 43 20 Flow > 10 MGD 24 50 Type III: Flow < 1 MGD 31 0 Type II: < 10 % 51 0 Flow 1 to 5 MGD 32 10 Flow > 5 to 10 MGD 33 20 10 % to <50 % 52 20 Flow > 10 MGD 34 30 > 50 % 53 30

Code Checked from Section A or B: 21

Total Points Factor 2: 10

# SECTION IN - INDUSTRIAL

| FACTOR 3: Conventional Pollutants (only when limited by the permit)            |                               |                              | NONE – Mo   | onitoring onl                       | У  | NPDES NO:  | VA008930                         | 3                       |
|--|-------------------------------|------------------------------|---|-------------------------------------|--|--|----------------------------------|-------------------------|
| A. Oxygen Demanding Po   | llutant: (che                 | ck one)                      | $\square$ BOD $\square$ COD $\square$ (   | Other:                              |  |  |                                  |                         |
| Permit Limits: (   | check one)                    |                              | < 100 lbs/day<br>100 to 1000 lbs/day<br>> 1000 to 3000 lbs/day<br>> 3000 lbs/day                        | Code<br>1<br>2<br>3<br>4            | Point 0 5 15 20                          |  | Checked:                         |                         |
| B. Total Suspended Solids  | (T\$\$)                       |                              |   |                                     |  | Point  | s Scored:                        |                         |
| b. Total Suspended Solids  | (133)                         |                              |   | 5/12                                |  |  |                                  |                         |
| Permit Limits: (   | check one)                    |                              | < 100 lbs/day<br>100 to 1000 lbs/day<br>> 1000 to 5000 lbs/day<br>> 5000 lbs/day                        | Code<br>1<br>2<br>3<br>4            | Pois<br>0<br>5<br>15<br>20               | nts  |                                  |                         |
|  |                               |                              |   |                                     |  | Code   | Checked:                         |                         |
| C. Nitrogen Pollutant: (che  | ck one)                       |                              | ☐ Ammonia ☐ (   | Other:                              |  | Points   | Scored:                          | _                       |
| Permit Limits: (   | check one)                    |                              | Nitrogen Equivalent<br>< 300 lbs/day<br>300 to 1000 lbs/day<br>> 1000 to 3000 lbs/day<br>> 3000 lbs/day | Code<br>1<br>2<br>3                 | Poi.<br>0<br>5<br>15<br>20               | nts  |                                  |                         |
|  |                               |                              | ,   |                                     |  | Code   | Checked:                         |                         |
|  |                               |                              |   |                                     |  | Point  | s Scored:                        |                         |
|  |                               |                              |   |                                     |  | <b>Total Points F</b>                            | actor 3:0_                       | _                       |
|  |                               |                              | FACTOR 4: Pu  | blic Healt                          | h Impact                                 |  |                                  |                         |
| Is there a public drinking water is a tributary)? A puabove referenced supply. | vater supply<br>ublic drinkir | located with<br>g water supp | hin 50 miles downstream of<br>oly may include infiltration  | f the effluent d<br>galleries, or c | ischarge (this inc<br>other methods of c | ludes any body of wate<br>conveyance that ultima | r to which the<br>tely get water | e receiving<br>from the |
| ☐ YES (If yes, check toxi  | city potenti                  | al number be                 | low)  |                                     |  |  |                                  |                         |
| ☐ X NO (If no, go to Facto   | or 5)                         |                              |   |                                     |  |  |                                  |                         |
| Determine the human heal health toxicity group colum                           | th toxicity p nn □ check      | otential fron<br>one below)  | n Appendix A. Use the san   | ne SIC code ar                      | nd subcategory re                        | ference as in Factor 1.                          | (Be sure to u                    | se the <u>human</u>     |
| Toxicity Group Co  | de Points                     |                              | Toxicity Group  | Code                                | Points                                   | Toxicity Group                                   | Code                             | Points                  |
| ☐ No process waste streams 0   | 0                             |                              | □ 3.  | 3                                   | 0  | □ 7.   | 7                                | 15                      |
| □ 1. 1   | 0                             |                              | □ 4.  | 4                                   | 0  | □ 8.   | 8                                | 20                      |
| □ 2. 2   | 0                             |                              | □ 5.  | 5                                   | 5  | □ 9.   | 9                                | 25                      |
|  |                               |                              | □ 6.  | 6                                   | 10                                       | □ 10.  | 10                               | 30                      |
|  |                               |                              |   |                                     |  | Code Number                                      | Checked:                         |                         |
|  |                               |                              |   |                                     |  | Total Points                                     | Factor 4:0                       |                         |

# SECTION IN - INDUSTRIAL

# **FACTOR 5: Water Quality Factors**

NPDES NO. VA0089303

| Α.         | . Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge: |              |                         |                           |               |                                    |   |  |
|------------|---|--------------|-------------------------|---------------------------|---------------|------------------------------------|---|--|
|            |   | X            | Yes                     | Code<br>1                 | Points<br>10  |                                    |   |  |
|            |   |              | No                      | 2                         | 0             |                                    |   |  |
| В.         | Is the receiving  | ig water ii  | n compliance with app   | olicable water quality    | v standards f | for pollutants that                | are water quality limited in the permit?  |  |
|            |   |              |                         | Codo                      | D             |                                    |   |  |
|            |   | X            | Yes                     | Code<br>1                 | Points<br>0   |                                    |   |  |
|            |   | Λ            | 1 05                    | 1                         | U             |                                    |   |  |
|            |   |              | No                      | 2                         | 5             |                                    |   |  |
| <i>C</i> . | Does the efflu  | ent discha   | rged from this facility | v exhibit the reasonal    | ble potential | to violate water q                 | uality standards due to whole effluent toxicity?  |  |
|            |   |              |                         | Code                      | Points        |                                    |   |  |
|            |   | X            | Yes                     | 1                         | 10            |                                    |   |  |
|            |   |              |                         |                           |               |                                    |   |  |
|            |   |              | No                      | 2                         | 0             |                                    |   |  |
|            | Code Number   | Checked      | A_1 B_1_                | C _1_                     |               |                                    |   |  |
|            | Points Factor   | r 5:         | A 10 + B 0              | + C <u>10</u> = <u>20</u> | TOTAL         |                                    |   |  |
|            |   |              | F . 6                   | TOD ( D                   |               |                                    |   |  |
|            |   |              | FAC                     | TOR 6: Proxi              | mity to I     | Near Coasta                        | l Waters  |  |
| A.         | Base Score: E   | inter flow   | code here (from Fact    | or 2): <u>21</u>          | En            | ter the multiplicat                | ion factor that corresponds to the flow code:0,10   |  |
|            | Check approp  | riate facili | ty HPRI Code (from      | PCS):                     |               |                                    |   |  |
|            | HPRI#   | Coa          | le HPRI Score           |                           | Flo           | ow Code                            | Multiplication Factor   |  |
|            |   | 1            | 20                      |                           | 1.1           | 31, or 41                          | 0.00  |  |
|            | 1 2   | 2            | 0                       |                           |               | , 31, or 41<br>, 32, or 42         | 0.00<br>0.05  |  |
|            | x□ 3  | 3            | 30                      |                           |               | , 32, 01 42<br>, 33, or 43         | 0.10  |  |
|            | 4   | 4            | 0                       |                           |               | or 34                              | 0.15  |  |
|            | 5   | 5            | 20                      |                           |               | or 51                              | 0.10  |  |
|            |   |              |                         |                           |               | or 52                              | 0.30  |  |
|            |   |              |                         |                           |               | or 53                              | 0.60  |  |
|            | HPRI code ch  | ecked: 3     |                         |                           | 24            |                                    | 1.00  |  |
|            |   |              |                         |                           |               |                                    | 2.00  |  |
|            | Base Score: ()  | HPRI Scor    | re) <u>30</u> X (Multip | olication Factor) 0.1     | = _3          | (TOTAL POIN                        | TS)   |  |
|            | B. Additional Points \( \subseteq NEP Program \) For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the   |              |                         |                           | С.            | For a facility the discharge any o | ts □ Great Lakes Area of Concern<br>at has an HPRI code of 5, does the facility<br>f the pollutants of concern into one of the<br>areas of concern (see Instructions) |  |

Code Number Checked:

Chesapeake Bay?

 $\begin{array}{cccc} & \text{Code} & \text{Points} \\ x & \text{Yes} & 1 & 10 \\ \hline & \text{No} & 2 & 0 \end{array}$ 

A <u>3</u> B <u>1</u> C 2\_

Code Points
Yes 1 10
X No 2 0

Points Factor 6:  $A \underline{3} + B \underline{10} + C \underline{0} = \underline{13}$  TOTAL

# State "Transmittal Checklist" to Assist in Targeting Municipal and Industrial Individual NPDES Draft Permits for Review

# Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

| Fa  | cility Name:  | Ampro Shipyard       |  |      |         |     |
|-----|---|----------------------|--|------|---------|-----|
| NF  | NPDES Permit Number: VA0089303  |                      |  |      |         |     |
| Pe  | rmit Writer Name:   | Denise Mosca         |  |      |         |     |
| Da  | te:   | 5-1-07               |  |      |         |     |
| N   | flajor [ ]  | Minor [x]            | Industrial [ x ]   | Muni | cipal [ | ]   |
| I.A | . Draft Permit Package S  | Yes                  | No   | N/A  |         |     |
| 1.  | Permit Application?   |                      | я  | х    |         |     |
| 2.  | Complete Draft Permit (for including boilerplate inform                           |                      | ne permit – entire permit,                                       | х    |         |     |
| 3.  | Copy of Public Notice?  |                      | Х  |      |         |     |
| 4.  | Complete Fact Sheet?  | x                    |  |      |         |     |
| 5.  | A Priority Pollutant Screen   | ing to determine p   | arameters of concern?  | х    |         |     |
| 6.  | A Reasonable Potential ar   | nalysis showing ca   | lculated WQBELs?   | x    |         |     |
| 7.  | Dissolved Oxygen calculate  | tions?               |  |      | X       |     |
| 8.  | Whole Effluent Toxicity Te  | est summary and a    | nalysis?   | х    |         |     |
| 9.  | Permit Rating Sheet for ne  | ew or modified indu  | ustrial facilities?  | х    |         |     |
| I.B | . Permit/Facility Characte  | eristics             |  | Yes  | No      | N/A |
| 1.  | Is this a new, or currently   | unpermitted facility | ?  |      | X       |     |
| 2.  | Are all permissible outfalls process water and storm valuationized in the permit? |                      | ned sewer overflow points, non-<br>ility properly identified and | Х    |         |     |
| 3.  | Does the fact sheet <b>or</b> per treatment process?                              | rmit contain a desc  | cription of the wastewater                                       | Х    |         | 5   |

| I.B | . Permit/Facility Characteristics – cont.   | Yes | No | N/A |
|-----|---|-----|----|-----|
| 4.  | Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?   | х   |    |     |
| 5.  | Has there been any change in streamflow characteristics since the last permit was developed?  |     | х  |     |
| 6.  | Does the permit allow the discharge of new or increased loadings of any pollutants?   |     | х  |     |
| 7.  | Does the fact sheet <b>or</b> permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses? | х   |    |     |
| 8.  | Does the facility discharge to a 303(d) listed water?   | x   |    |     |
|     | a. Has a TMDL been developed and approved by EPA for the impaired water?  |     | х  |     |
|     | b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?  |     | х  |     |
|     | c. Does the facility discharge a pollutant of concern identified in the TMDL or<br>303(d) listed water?   |     | ×  |     |
| 9.  | Have any limits been removed, or are any limits less stringent, than those in the current permit?   |     | x  |     |
| 10  | Does the permit authorize discharges of storm water?  | X   |    |     |
| 11  | Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?   |     | х  |     |
| 12  | Are there any production-based, technology-based effluent limits in the permit?   |     | ×  |     |
| 13  | Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?   |     | х  |     |
| 14  | Are any WQBELs based on an interpretation of narrative criteria?  |     | ×  |     |
| 15  | Does the permit incorporate any variances or other exceptions to the State's standards or regulations?  |     | x  |     |
| 16  | Does the permit contain a compliance schedule for any limit or condition?   | ×   |    |     |
| 17  | Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?   |     | х  |     |
| 18  | . Have impacts from the discharge(s) at downstream potable water supplies been evaluated?   | х   |    |     |
| 19  | Is there any indication that there is significant public interest in the permit action proposed for this facility?  |     | х  |     |
| 20  | . Have previous permit, application, and fact sheet been examined?  | Х   |    |     |

# Part II. NPDES Draft Permit Checklist

# Region III NPDES Permit Quality Review Checklist – For Non-Municipals (To be completed and included in the record for <u>all</u> non-POTWs)

| 11./ | A. Permit Cover Page/Administration   | Yes | No | N/A |
|------|---|-----|----|-----|
| 1.   | Does the fact sheet <b>or</b> permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)? | х   |    |     |
| 2.   | Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?   | х   |    |     |

| 11.1 | 3. Effluent Limits – General Elements   | Yes | No | N/A |
|------|---|-----|----|-----|
| 1.   | Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)? | х   |    |     |
| 2.   | Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?   | х   |    |     |

| 11.0 | C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)   | Yes | No | N/A |
|------|---|-----|----|-----|
| 1.   | Is the facility subject to a national effluent limitations guideline (ELG)?   |     | х  |     |
|      | a. If yes, does the record adequately document the categorization process,<br>including an evaluation of whether the facility is a new source or an existing<br>source?                             |     |    | x   |
|      | b. If no, does the record indicate that a technology-based analysis based on<br>Best Professional Judgement (BPJ) was used for all pollutants of concern<br>discharged at treatable concentrations? |     |    | х   |
| 2.   | For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?  |     |    | х   |
| 3.   | Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?   |     |    | x   |
| 4.   | For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?         |     |    | X   |
| 5.   | Does the permit contain "tiered" limits that reflect projected increases in production or flow?   |     | х  |     |
|      | a. If yes, does the permit require the facility to notify the permitting authority<br>when alternate levels of production or flow are attained?   |     |    | Х   |
| 6.   | Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?   |     |    | Х   |

| 11.0 | C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ) – cont.  | Yes | No | N/A |
|------|--|-----|----|-----|
| 7.   | Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits? |     |    | Х   |
| 8.   | Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?                  |     | х  |     |

| II.D. Water Quality-Based Effluent Limits |   |     |   | N/A |
|---|---|-----|---|-----|
| 1.  | Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?   | , X |   |     |
| 2.  | Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?   |     |   | х   |
| 3.  | Does the fact sheet provide effluent characteristics for each outfall?  | х   |   |     |
| 4.  | Does the fact sheet document that a "reasonable potential" evaluation was performed?  | х   |   |     |
|   | a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?  | х   |   |     |
|   | b. Does the fact sheet describe the basis for allowing or disallowing in-stream<br>dilution or a mixing zone?   | x   |   |     |
|   | c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?  | х   |   |     |
|   | d. Does the fact sheet indicate that the "reasonable potential" and WLA<br>calculations accounted for contributions from upstream sources (i.e., do<br>calculations include ambient/background concentrations where data are<br>available)? |     | х |     |
|   | e. Does the permit contain numeric effluent limits for all pollutants for which<br>"reasonable potential" was determined?   | x   |   |     |
| 5.  | Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?   | х   |   |     |
| 6.  | For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?   | x   |   |     |
| 7.  | Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?  | х   |   |     |
| 8.  | Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?   | х   |   |     |

| II.I | E. Monitoring and Reporting  | Requirements  |              | Yes | No   | N/A |
|------|--|---|--------------|-----|------|-----|
| 1.   | Does the permit require at lea   | st annual monitoring for all limited p  | arameters?   | х   |      |     |
|      |  | dicate that the facility applied for and r, AND, does the permit specifically |              |     |      | x   |
| 2.   | Does the permit identify the pherformed for each outfall?  | nysical location where monitoring is  | to be        | х   |      |     |
| 3.   | Does the permit require testing the State's standard practices   | g for Whole Effluent Toxicity in acco   | ordance with | x   |      |     |
| II.  | F. Special Conditions  |   |              | Yes | No   | N/A |
| 1.   | Does the permit require development Practices (BMP)  | opment and implementation of a Be<br>plan or site-specific BMPs?              | st           | x   |      |     |
|      | a. If yes, does the permit adeq the BMPs?  | quately incorporate and require com   | pliance with | х   |      |     |
| 2.   | 2. If the permit contains compliance schedule(s), are they consistent with<br>statutory and regulatory deadlines and requirements? |   |              |     |      |     |
| 3.   |  | e.g., ambient sampling, mixing studi<br>tent with CWA and NPDES regulati      |              | х   |      |     |
| 11.  | G. Standard Conditions   |   |              | Yes | No   | N/A |
| 1.   | Does the <b>permit</b> contain all 40 equivalent (or more stringent)   | CFR 122.41 standard conditions of conditions?                                 | or the State | х   |      |     |
|      | st of Standard Conditions – 4  | 0 CFR 122.41  |              |     |      |     |
| Li   |  |   |              |     | ents |     |

X

2. Does the permit contain the additional standard condition (or the State

equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?

# Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

| Name      | Denise M. Mosca             |  |
|-----------|-----------------------------|--|
| Title     | Environmental Specialist II |  |
| Signature | SMMvsca                     |  |
| Date      | 5/1/07                      |  |

# ATTACHMENT G



# **MEMORANDUM**

# DEPARTMENT OF ENVIRONMENTAL QUALITY Piedmont Regional Office

4949-A Cox Road, Glen Allen, Virginia 23060 804/527-5020

TO:

Deborah DeBiasi, Toxics Program Manager, OWPS

FROM:

Denise Mosca, PRO Environmental Specialist Curtis Linderman, PRO Water Permits Manager

THROUGH: DATE:

SUBJECT:

April 23, 2007, revised June 2, 2008

Data Evaluation and Review for the Ampro Shipyard, VA0089303

COPIES:

Facility Name:

Ampro Shipyard

Permit Number:

VA0089303

Design Effluent Flow:

approx. 20,000 gal per pressure wash event

Receiving Stream

Rappahannock River (Tidal)

Receiving Stream Salinity (Mean): 16.5%

Facility SIC:

3732

Instream Waste Concentration (IWC): unknown

# Facility Description:

The permit for the Ampro Shipyard is in the process being reissued. The facility is located on Carter;'s Creek in Weems, Va. The owner pressure washes vessels to create a process water discharge from the Crandalltype railway. BMPs address incidental discharges from these operations. Any other discharge is due to stormwater. No production based technology guidelines were found to apply. Because of the tidal nature of the discharge, no 1Q10 and 7Q10 flows are appropriate.

### Facility TMP Requirements and History:

When the permit was reissued on July 29, 2002, the Toxics Management Program (TMP) special condition was included because DEQ guidance specifies a TMP for this SIC code. The TMP for the pressure wash outfall 001 required quarterly 48-hour acute tests with Mysidopsis bahia and Cyprinodon variegates using 24hour flow-proportioned composites. A minimum of 10 tests for each species were to be performed, with 75% of the acute tests required to meet the endpoint of LC50 > 100%.

#### Data Review and Summary:

The tests were performed by CBI, Inc.

| DUE                  | COMPLETED                  | Vessel<br>Length | M<br>bahia<br>LC 50<br>Result | C.<br>variegates<br>LC 50<br>Result | % Survival in 100%<br>Effluent |                  | ls test<br>acceptable | Est. Total<br>Volume | Comments |
|----------------------|----------------------------|------------------|-------------------------------|-------------------------------------|--------------------------------|------------------|-----------------------|----------------------|----------|
|                      |                            |                  |                               |                                     | M<br>bahia                     | C.<br>variegates |                       |                      |          |
| 1 Q3<br>- Oct<br>03  | 6-1-05 Suzee<br>Q          | 95 ft            | >100                          | >100                                | 55                             | 100              | N                     | 14,000<br>gal        | 1,3      |
| 2 Q1<br>– Jan<br>04  | 10-18-05<br>Shear-Water    | 120 ft           | >100                          | >100                                | 100                            | 100              | N                     | 20,000<br>gal        | 1,3      |
| 3 Q2<br>- Apr<br>04  | 1-18-05 Crystal<br>& Katie | 195 ft           | >100                          | >100                                | 100                            | 100              | N                     | 28,000<br>gal        | 1,3      |
| 4 Q3<br>- Jul<br>04  | 9-11-06 Capt.<br>Ellery    | 65 ft            | 33.3                          | >100                                | 10                             | 90               | N (M. bahia)          | 17,000<br>gal        | 3        |
| 5 Q4<br>- Oct<br>04  | 9-12-06 Miss<br>Maude      | 90 ft.           | 15                            | >100                                | 15                             | 100              | N (M. bahia)          | 29,000<br>gal        | 3        |
| 6 Q1<br>– Jan<br>05  | 4-27-07 Osprey             | Not<br>reported  | >100                          | >100                                | 100                            | 100              | Y                     | Not<br>reported      | 3        |
| 7 Q2<br>- Apr<br>05  | 4-11-08 Osprey             | Not<br>reported  | >100                          | >100                                | 100                            | 100              | Y                     | Not<br>reported      | 3        |
| 8 Q3<br>- Jul<br>05  |                            |                  |                               |                                     |                                |                  |                       |                      |          |
| 9 Q4<br>- Oct<br>05  |                            |                  |                               |                                     |                                |                  |                       |                      |          |
| 10 Q1<br>– Jan<br>06 |                            |                  |                               |                                     |                                |                  |                       |                      |          |

#### Comments

- 1. Incorrect Sample—performed Grab instead of Composite
- 2. Did not take pH, Temperature and/or TRC at site or within 15 min. of composite completion
- 3. Took pH, Temperature, did not take TRC at site or within 15 min. of composite completion

#### Discussion:

The owner did not perform all of the required testing. Of those tests, 6 of the 14 performed were the wrong sample type. Eight tests did reflect the correct sample type, and two of those invertebrate tests suggest toxicity.

#### Recommendations:

It is recommended that the facility continue acute toxicity testing for the life of the permit using *Mysidopsis* bahia (now Americamysis bahia) and Cyprinodon variegatus.

The facility is currently referred to Enforcement for not submitting DMRs and TMP tests when required. Quarterly TMP submittals for this facility just are not practical, as the owner does not know when ships will come in for work that includes pressure washing, and in some years the activity does not take place often enough that at least one each quarter will be performed. Instead, it is recommended that the facility be responsible for a minimum number of tests over the life of the permit, to be submitted at a rate of a minimum of 3 per year.

It is also suggested that the facility borrow a chlorine analyzer from Rappahannock Westminster -

Data Evaluation and Review Permit Number: VA0089303

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Canterbury, the Town of Kilmarnock or Windmill Point in order to test for TRC at the site once the sample composite is completed.

Toxics Management Program (TMP)

- Biological Monitoring (001)
  - a. In accordance with the schedule in 3. below, the permittee shall conduct a minimum of 11 acute toxicity tests for each of the two species for the duration of the permit. The permittee shall collect 24-hour flow-proportioned composite samples of final effluent from outfall 001 when it is not raining. The permittee shall collect the samples as described in 2, below.
  - The acute multi dilution NOAEC tests to use are:

     48 Hour Static Acute test using Americamysis bahia (formerly Mysidopsis bahia)

48-hour static test using Cyprinodon variegates

These acute tests shall be performed using 5 geometric dilutions of effluent with a minimum of 4 replicates, with 5 organisms in each. The NOAEC (No Observed Adverse Effect Concentration), as determined by hypothesis testing, shall be reported on the DMR as NOAEC = % effluent. The LC $_{50}$  should also be determined and noted on the submitted report. Tests in which control survival is less than 90% are not acceptable.

The permittee may provide additional samples to address data variability; these data shall be reported and may be included in the evaluation of effluent toxicity. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3

b. The test dilutions should be able to determine compliance with the following endpoints:

Acute NOAEC of 100% equivalent to a TUa of 1.00

- c. The test data will be evaluated for reasonable potential at the conclusion of the permit term. The data may be evaluated sooner if toxicity has been noted. Should evaluation of the data indicate that a limit is needed, a WET limit and compliance schedule will be required and the toxicity tests in 1 a. above may be discontinued. The permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limits must control the toxicity of the effluent.
- Effluent Sampling and Reporting Requirements Outfall 001
  - a. The permittee shall collect composite samples of effluent from outfall 001 for biological testing when pressure washing occurs. Each composite sample shall consist of grab samples collected hourly during the period of discharge or, during the initial 24 hours of discharge, should the duration of the discharge exceed 24 hours. Effluent sampling shall begin as soon as possible following the initiation of the discharge.
  - b. The permittee shall include (see Attachment B) with results of Whole Effluent Toxicity tests performed with a particular sample:
    - (1) The name, size and type of vessel receiving service, and the type(s) of service(s) being provided (complete coating removal, existing surface profiling, means of water blasting performed and pressures used, etc.).

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- (2) The type and expected composition of the hull coating being removed or prepared for resurfacing.
- (3) The date and time that the samples were collected, the time that process wastewater generating activities began and a detailed description of the method(s) by which the samples were collected (written, photographic, etc.).
- (4) An estimate of the total volume of process wastewater generated, the total duration of the wastewater generating event, and a description of the best management practices imposed to reduce the potential for pollutants to enter the receiving stream from these types of process activities.
- c. If a significant delay occurs between the beginning of any discharge and the time that any effluent samples are obtained, the permittee may be required to justify the reasons for any such delays. Failure to sample or report as required above may result in invalidation of a particular sample or test result.

### 3. Reporting Schedule for 001

The permittee shall submit reports in accordance with the schedule below with the monthly submittals and supply 2 copies of the toxicity test report for the tests specified. By the compliance dates listed below, for calendar years 1-3, the permittee shall have submitted 3 tests for each species. A minimum of one test for each species shall be required for years 4 and 5:

| Compliance Date | Submittal Date   |
|-----------------|--|
| By 12/31/2008   | By 01/10/2009  |
| By 12/31/2009   | By 01/10/2010  |
| By 12/31/2010   | By 01/10/2011  |
| By 12/31/2011   | By 01/10/2012  |
| By 12/31/2012   | By 01/10/2013  |
|                 | By 12/31/2008<br>By 12/31/2009<br>By 12/31/2010<br>By 12/31/2011 |

In the event that sampling of a particular outfall as in 1. above, is not possible due to the absence of effluent flow during a particular testing period, the permittee shall provide written notification to the Department's Piedmont Regional Office with the DMR submitted for the month following the period in which the toxicity tests were to have been conducted. In such cases, the reporting schedule in 3, above, shall be adjusted. The requirement for sampling of the outfall shall continue until the required number of toxicity tests have been performed.



# COMMONWEALTH of VIRGINIA

# DEPARTMENT OF ENVIRONMENTAL QUALITY PIEDMONT REGIONAL OFFICE

L. Preston Bryant, Jr. Secretary of Natural Resources 4949-A Cox Road, Glen Allen, Virginia 23060 (804) 527-5020 Fax (804) 527-5106 www.deq.virginia.gov

September 30, 2008

David K. Paylor Director

Gerard Seeley, Jr. Regional Director

Ms. Lynn Haynie General Manager Ampro Shipyard P. O. Box 2056 Kilmarnock, Virginia 22482

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE: VPDES Permit Reissuance VA0089303 Ampro Shipyard – Lancaster County

Dear Ms. Haynie:

Your VPDES permit is enclosed. A Discharge Monitoring Report (DMR) form is included with the permit. Please make additional copies of the DMR for future use. The first DMR required by this permit is for stormwater sampling due on January 10, 2009 for the period of October 1 through December 31, 2008. If you still have DMR data to report as required by the previous permit please submit it as an attachment to the first DMR required by this permit. Monitoring results on the DMRs should be reported to the same number of significant digits as are included in the permit limit for the parameter. Please send DMRs to:

Virginia DEQ, Piedmont Regional Office 4949-A Cox Road Glen Allen, Virginia 23060

Note that DEQ has launched an e-DMR program that allows you to submit the effluent data electronically. If you are interested in participating in this program please visit the following website for details:

# http://www.deq.virginia.gov/water/edmrfaq.html

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

Alternatively, any owner under § 62.1-44.16, 62.1-44.17 and 62.1-44.19 of the State Water Control Law aggrieved by any action of the State Water Control Board taken without a formal hearing, or by inaction of the Board, may demand in writing a formal hearing of such owner's grievance, provided a

Permit No. VA0089303 Ampro Shipyard Page 2

petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in 9 VAC 25-230-130.B. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

If you have any questions about the permit, please contact Denise Mosca at (804) 527-5027 or dmmosca@deq.virginia.gov.

Sincerely,

Curtis J. Linderman, P.E. Water Permits Manager

Enclosure:

Memorandum

Permit No. VA0089303

CC:

**OWPS** 

EPA, Region III-3WP12

VDH-ECEFO

#### **MEMORANDUM**

# DEPARTMENT OF ENVIRONMENTAL QUALITY Piedmont Regional Office

4949-A Cox Road, Glen Allen, VA 23060

804/527-5020

SUBJECT:

Reissuance of VPDES Permit No. VA0089303

Ampro Shipyard - Lancaster County, Virginia

TO:

C. J. Linderman, P.E., Water Permit Manager

FROM:

Denise M. Mosca, Permit Writer

DATE:

September 30, 2008

COPIES:

PRO-OWPP, EPA-Region III-3 WP12

Legal Name of Owner:

Chesapeake Bay Fishing Co., LLC d/b/a Ampro Shipyard

Application Submitted By:

Lynn Haynie, Manager

Application Date:

Initial application was submitted on January 29, 2007. Date of

complete application: June 5, 2008.

Permit Fee:

Ampro Shipyard was not included on the latest FY08-Water-AMF-Past Due spreadsheet dated 6-26-08 as not being current with permit fees. The most current annual permit fee was deposited on

September 18, 2007.

Type of Discharge:

The owner pressure washes vessels to create a process water discharge with an average of 21,600 gpd. Stormwater discharges are located alongside the railway, bulkhead and from the docks.

Wastewater Treatment

None.

Receiving Stream:

Stream:

Carter's Creek

Basin:

Rappahannock River

Subbasin:

N/A

Section:

1

Class:

Special Standard: a

Public Notice:

The application and draft permit have received public notice in

accordance with the Permit Regulation and no comments were

received.

Reissuance of VPDES Permit No. VA0089303 Ampro Shipyard Page 2

Planning:

The discharge is not addressed in any planning document but will

be included when the plan is updated.

EPA Comments:

EPA has waived the right to review the subject draft permit.

VDH Comments:

The application was sent to the VDH-ECFO. They replied on September 26, 2008 that there are no public water supply intakes within 15 miles downstream of the discharge/activity and that there was no objection to the permit. VDH-DSS comments are not required for industrial permits without a sewage component to the

discharge.

Previous Board Action:

None

Staff Comments:

The discharge is not controversial.

The permit expired July 29, 2007. Difficulties with reissuing this

permit before expiration occurred in obtaining a complete

application.

The staff believes that the attached effluent limitations will

maintain the Water Quality Standards adopted by the

Board.

Basis for Effluent Limits:

Water Quality Standards, Best Engineering Judgment

Licensed Operator

Requirements:

None

#### STAFF RECOMMENDATIONS:

The staff recommends that:

1. The attached effluent limitations and monitoring requirements be approved.

2. VPDES Permit No. VA0089303 be reissued.

APPROVED:

Water Permits Manager

DATE:

9/30/08